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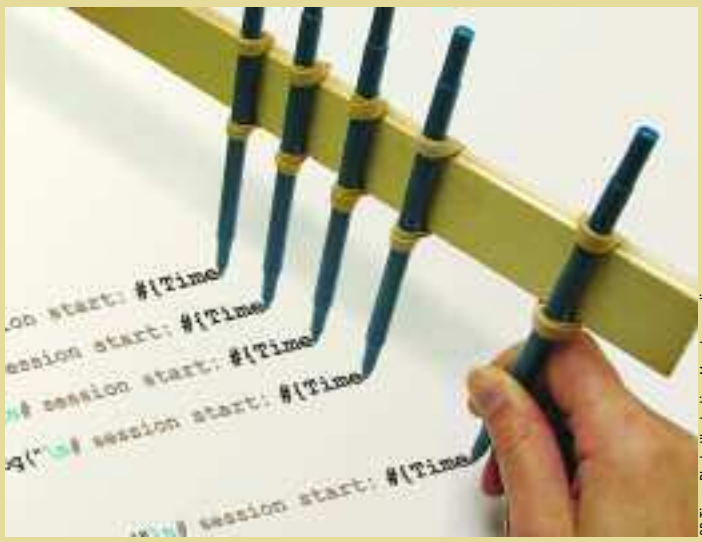
SD Times Photo Illustration: Mara Leonardi

PeakStream Is Extraordinarily Serious Runtime for HPC

BY EDWARD J. CORREIA

PeakStream is not about playing games. But the new company has its eye on IBM's Cell processor and high-speed graphics processor units, even though those circuits are being used today mainly to run entertainment software.

Former executives of Sun Microsystems, VMware and Nvidia, the graphics accelerator chip maker, have joined to form PeakStream Inc. Flush with US$17 million in Series B funding, the company in September unveiled the PeakStream Platform, a runtime solution for high-performance computing that it claims abstracts the complexities and pitfalls of programming for multiple processors or cores while improving application performance by more than twentyfold.

The all-software solution includes the PeakStream Server, which installs on top of an Intel-based machine with an optional board containing one or more graphics processor units (GPUs). "This is substantial technology that allows you to run an application on top of a graphics processor," said Matt Papakipos, PeakStream's CTO and former architecture lead with Nvidia.

An evaluation version for Linux was set to be released on Sept 18; general availability is scheduled before the end of this year. Pricing is set at $2,000 per server.

Papakipos said that to take advantage of the PeakStream APIs, a developer need only include the appropriate PeakStream libraries in new or existing C/C++ apps. "A virtual machine provides an abstraction layer on

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Microsoft Won't Make Atlas Wait for Orcas

Rich client app components will be available this year

BY P.J. CONNOLLY

Developers who expected that Microsoft would sit on its AJAX technologies until the release of Visual Studio "Orcas" received a surprise last month, when the company announced naming plans and a road map. The software in development under the code name Atlas will ship later this year, taking the form of a control toolkit, a client-side library, and a server-side piece that builds upon the client bits, with full support from Microsoft.

The client JavaScript library, which Microsoft claims will work with any browser, or any back-

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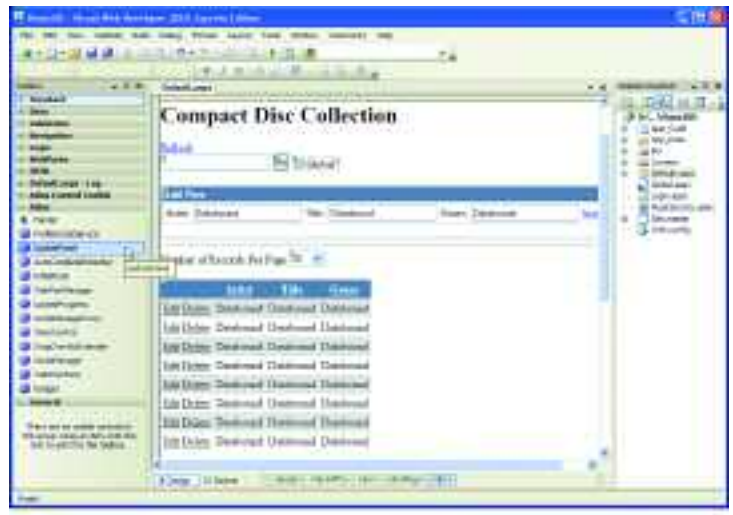

ASP.NET 2.0 AJAX controls (shown here as Atlas) can be easily incorporated into tools aimed at Web designers as well as classic development tools.

Enterprises Don't Catch Mono

Why Mono isn't spreading inside the corporate world

BY ALEX HANDY

Matt Hargett hates it when a bug is resurrected. So, when he started fiddling with Mono to help move his company's Windows-based vulnerability scanner onto Linux, he was frustrated to see some bugs vanish in one build, only to reappear in the next.

Because of that, Hargett isn't convinced that Mono, the open-source .NET Framework project sponsored by Novell, would be a good choice for his next project. It would appear that enterprise developers agree. According to

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Mono lacks automated unit tests, says consultant Matt Hargett.

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Repository Completes BEA SOA Play

Analyst sees Flashline as complementary, not redundant, to Systinet

BY ALEX HANDY

Prior to BEA Systems' acquisition of Flashline in August, the company's SOA offerings were sorely lacking in governance capabilities. That's according to Forrester Research senior analyst Larry Fulton, who said that the Flashline repository brings a more complete AquaLogic to the table. Fulton expects the acquisition to improve AquaLogic's governance capabilities, and did not see cause for worry in the overlap that could potentially exist between the Systinet Registry and the Flashline Repository, both of which are now standard pieces of the AquaLogic puzzle.

When BEA's Flashline acquisition was first announced in August, SD Times reported ZapThink senior analyst Jason Bloomberg was concerned that BEA's decision to include the Systinet UDDI registry in AquaLogic would create a governance capability overlap that could cause unneeded complexity. But neither BEA nor Fulton sees this as a problem.

"BEA views them as complementary," said Paul Patrick, vice president and chief architect of AquaLogic. "BEA Systems' AquaLogic Enterprise Repository enables design-time governance. As assets are planned, designed and implemented, ALER tracks their compliance with established policies, standards and architectural compliance to ensure the right things are being created in the right way. ALSR [AquaLogic Systinet Registry] augments ALER by enabling runtime governance for deployed services."

Fulton agreed, adding that the only added overlap and complexity created by Flashline exists on the development side of the SOA platform. He said that Flashline and LogicLibrary, a competing repository, are typically considered together by his clients. And when they've been rejected, it's usually because of this overlap. "Mostly what happens is Flashline and LogicLibrary are on or off [a client's] list for the same reasons; that's because they're in the development space. I've talked to more clients that say, 'Well, I already have the means to manage my development process.' They felt there was complexity there that wasn't giving them a value-add."

'ALSR augments ALER by enabling runtime governance for deployed services.'

—Paul Patrick, vice president and chief architect of AquaLogic, BEA

Fulton went on to state that the governance capabilities of Flashline are heavily concentrated on the development cycle, rather than on the governance of active services. He did point out that some of the approval capabilities of Flashline and the Systinet Registry are similar. BEA's Patrick, however, drew a clear line between the two systems' abilities in this space.

"When speaking specifically of the publishing approval capability built in to ALSR, this also is complementary to the capabilities in ALER." This built-in approval capability, he explained, allows published services to be set up in a staging instance of ALSR prior to being moved to a production instance for enterprisewide discovery. "While only approved services get synchronized with ALSR from ALER, the approval step in ALSR can still be used by operations for release management, ensuring proper deployment," said Patrick.

Another issue Bloomberg spoke of was Flashline's inability to scale up for large projects, something that he said LogicLibrary was more capable of handling. Fulton expects BEA to address this issue quickly. "If they have scalability issues," he said, "they have a tremendous number of resources that can straighten that out." ▮

Linux on the Desktop? Experts Weigh In

What does Linux still need to become the developer's desktop OS of choice?

BY ALEX HANDY

There is no denying that Microsoft has the development desktop market locked up with Windows XP. But with Linux already making large inroads to the server, how much more work is needed to challenge Windows on the desktop? We asked some of the biggest brains in the Linux world what they thought Linux still needed. Here are their answers.

Mark Shuttleworth, CEO, Canonical, which publishes and maintains Ubuntu Linux

I think developers will generally tend to favor the desktop closest to their production deployment environment. So Web developers are already likely to be using a Linux desktop because of the prevalence of Linux in the Web side of the data center. In the case of desktop applications software developers, this is then a question about when Linux will emerge on the enterprise desktop. In some cases I can imagine that happening soon—tightly controlled desktop environments like call centers can now be run very effectively on Linux. In the general desktop sense, I think it will take till 2010 at least before we see significant inroads, and perhaps a further five years before Linux could make up a majority.

Francois Bancilhon, CEO, Mandriva

Developers have used desktops related to the APIs for which they develop. In fact, APIs and developers tools have been a key to the success of Microsoft products, in the '90s.

In the last five years, we can observe a similar trend of adoption of new Linux/open-source APIs coming on the market through the new server-oriented applications (LAMP, J2EE, Ruby, etc.), so that it will drive Linux on the enterprise developers' desktops too. This phenomenon has perhaps been slower than expected because Linux is not the only OS to support the new APIs (Windows is compatible too), but Linux has the edge for new development tools and platforms: Software is more up to date; Eclipse has closed the gap with Visual Studio and goes far beyond VS' scope now. Plus the rapid downfall of VB applications and Office integration software will act as an additional force to bring more Linuxes on the enterprise developer's desktop.

Finally, the paradigm shift to Web 2.0 technologies and applications will have a strong impact: Development of Web 2.0 applications lends itself very much to the Linux environment. Very attractive AJAX development environment in the Linux world will be another reason for considering Linux.

Bill Roth, vice president of Workshop Division, BEA Systems

What Linux needs to become the desktop of choice among developers is threefold: First, there needs to be a widely adopted, consistent and easily installable desktop OS, like Ubuntu. Second, there needs to be a lot of Microsoft interoperability as part of the mix, since 90 percent of the world's machines are running a Microsoft OS. Third, there needs to be a choice of development environments across a broad array of languages and language platforms, not just Java and not just native programming.

Bernard Golden, CEO, Navica

While many people seek a magic bullet that will transform Linux into an overnight desktop success, I hold the view that Linux is doing exactly what it needs to achieve critical mass among developers and other users. People forget that the currently reigning champion, Microsoft Windows, took a number of years before it became a must-have platform.... The Linux community is assiduously addressing the main impediments to Linux adoption: driver and application availability. With regard to the latter, the Portland project [is] seeking to provide a way by which developers can create one application that will run on both Gnome and KDE. With efforts like these, Linux will continue its growth path and take its place on the enterprise development desktop.

Andy Glover, president, Stelligent

From a development environment standpoint, Linux is the way to go—Java, Python, Ruby, PHP, MySQL, Apache, they're all there. Even the Mono project brings .NET to Linux. Aside from the obvious differences between Mono tools and Visual Studio, most other languages' tools are similar across platforms.

The applications that interact with the rest of an organization are primarily the reason why many enterprises haven't adopted Linux. The support issues caused as a result of differences between MS Office and OpenOffice and the integration with Exchange have forced many organizations to deem Linux as too costly. The good news is that a lot of work is being done here on the Linux side—once heterogeneous operating systems can truly work together on a business front, adopting Linux can prove to be a cost-saving choice. ▮

News Briefs

COMPANIES

Sun Microsystems has created and released an installation program that bundles the company's NetBeans open-source IDE with Red Hat's JBoss application server, giving developers the ability to do a single install and begin developing sophisticated Java EE applications. The installer will run on Linux, Mac OS X, Solaris and Windows . . . Data services solutions provider **GemStone Systems** has partnered with **Platform Computing** to create a combined offering that, according to the companies, lets organizations visualize, share and manage data on a grid-based infrastructure. GemStone's GemFire Enterprise Data Fabric provides data access, routing and delivery, while Platform's Symphony manages the CPU utilization . . . **IBM** last week unveiled its first set of services for enterprise developers using Eclipse. For around US$400 per user per year, the services will provide online, telephone and defect support similar to IBM's other enterprise support programs. The program covers Eclipse 3.2 only.

NEW PRODUCTS

Performance management software company Symphoniq has extended its TrueView diagnostics software to the JBoss application server platform. **TrueView J2EE Diagnostics for JBoss** can home in on method calls and SQL queries that lead to performance drop-offs, freeing developers and QA from having to manually sift through their Java applications. The new tool and TrueView .NET Diagnostics make up Symphoniq's TrueView Web Management Suite, which provides application management across platforms . . . FarPoint Technologies has made available **Spread for BizTalk**, which converts Microsoft Excel XLS data into XML for integration into business process solutions. It works with Microsoft's BizTalk Server 2006 and Visual Studio 2005, the latter of which is integrated with a FarPoint wizard for creating schema to map the resultant XML messages into a BizTalk process . . . Dundas Software has introduced **Dundas Map for .NET**, a data visualization tool for adding geographic data into dashboards. It supports AJAX and Visual Studio 2003 and 2005, and costs US$899 for the ASP.NET edition and $1,499 for the Windows Forms edition.

UPGRADES

Jcx.Software has released **VS.Php 2.1**, a PHP IDE that plugs into Visual Studio .NET (2002 edition), Visual Studio .NET 2003 and Visual Studio 2005, and introduces a stand-alone edition that includes the core Visual Studio IDE. The new version supports automatic code formatting and the use of code snippets, as well as IntelliSense configuration . . . Green Hills Software has announced that its **µ-velOSity** real-time operating system microkernel is now available for Analog Devices' Blackfin processors . . . Version 2.0 of **Dundas Chart for Reporting Services** has been released by Dundas Software. The data visualization tool for SQL Server Reporting Services includes an updated wizard with design time data binding and formulas, and new 2D/3D effects and chart types . . . MValent is releasing a version of its **Integrity** application configuration management software for BEA's WebLogic . . . Security analysis software provider Beyond Security has released **beSTORM 2.0**, which the company says brings the "80-20" rule into its "smart black box" security testing. This testing requires access to a deep repository of known vulnerabilities, as the software will try to first find the problem from among the known vulnerabilities that trigger the majority of application problems before looking for problems of unknown origin. beSTORM, which uses "fuzz" testing to perform practical vulnerability assessments, targets device and embedded systems engineers because of the limited processors in those devices . . . eCube Systems, which offers systems and services to help companies manage and evolve their business logic from aging technology and infrastructure, has

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Where Does Ruby Fit in the Enterprise?

Bruce Tate talks the business of Ruby

BY ALEX HANDY

When Ruby first burst onto the scene in 1993, no one paid much attention. How could they? The World Wide Web was the hot new technology back then, and new programming languages are rarely ready for prime time when first released.

But now, 13 years later, the language has found much love on the Web, due to the release of Ruby on Rails, a Web application framework that puts the power of Ruby in the hands of Web developers. Thanks to the language's relative simplicity and the framework's strict adherence to the model-view-controller architecture, Ruby on Rails has gathered a reputation for being a fast and easy on-ramp to creating Web 2.0 applications.

This fall, O'Reilly released "Ruby on Rails: Up and Running," by Bruce Tate and Curt Hibbs. We caught up with Tate in September and had a chat with him about where Ruby on Rails fits in the enterprise.

SD Times: Where should Ruby on Rails be used in an enterprise? What holes does it fill?

Bruce Tate: Right now, Ruby on Rails works best for green-field, database-backed Web applications with moderate scalability requirements. This is a significant share of applications that are used for Java today. People are starting to push Rails into other areas as well, such as those requiring more scalability, or applications without database backing, but both of those areas are experimental.

What advantages does Ruby on Rails have over other Web development frameworks? If an organization already has a system in place for Web development, is there actually any time savings by throwing that all out and starting over with Ruby on Rails?

Ruby on Rails is simply more productive, but that almost never means rewriting an application for the sake of a rewrite. It's important to deliver tangible business value with each step, so you should only rewrite existing applications if the current one can no longer satisfy business requirements, and Ruby on Rails can.

How has Ruby on Rails changed over the past year?

Ruby on Rails is moving from an edge product to the mainstream as we speak. There are more Rails books, Rails developers and Rails projects that can be used to draw experience. Web services (especially ReST-style Web services), AJAX support and the database mapping layers called Active Record are all buzzwords popular in the Rails community, and they each have had major innovations. ReST is a simpler model for Web services; AJAX uses XML and JavaScript to deliver richer Internet user interfaces, and Active Record represents a more direct approach for dealing with the database.

What sort of supporting tools are out there for collaborative Ruby coding?

The tools that support Rails are not your typical integrated development environments. Instead, you see excellent support for features like these: Interpreting commands while a Rails application is executing. For example, I can set a breakpoint, and print out all of the values for the variables in my application, and even change them, and then resume execution. That's not a traditional debugger, but in some ways, it's more powerful.

Automated testing support goes beyond most other language testing tools. Ruby builds much of the testing infrastructure for you by default.

Are there any agile-specific Ruby tools?

Collaboa is a great tool for managing requirements on a Ruby project. Selenium is a great testing tool that works with Web apps, even those with AJAX, including Rails. And there's a great editor with outstanding integration called TextMate. JetBrains is working on a Ruby IDE, and RadRails is a pretty good Ruby on Rails environment based on Eclipse. ▮

SAP PREVIEWS NETWEAVER DEV SUITE

BY P.J. CONNOLLY

SAP's partners got a first look at improvements to SAP NetWeaver, designed to simplify composite application development, at the recent SAP TechEd '06 conference in Las Vegas. The company demonstrated a visual, standards-based tool for creating and executing complete composite applications designed to stimulate business process innovation, while keeping core ERP systems running behind the scenes without disruption.

NetWeaver Composition Environment builds on existing SAP technologies and tools, including the Composite Application Framework (CAF) that exposes services to applications, NetWeaver Visual Composer, which creates and modifies the composite views used by business process experts, and the Web Dynpro development tool that uses guided procedures to help programmers grapple with composite processes.

The forthcoming composition suite is expected to help developers integrate non-SAP applications and systems, as well as applications built on mySAP ERP 2005 and SAP NetWeaver 2004s, into composite applications running on a decoupled foundation.

NetWeaver Composition Environment makes use of Eclipse 3.2 and the Eclipse Web Tools Platform. ▮

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AccuRev 4.5 Adds More SCM Control

BY ALEX HANDY

AccuRev is angling to give users of its namesake source code management system more control of their code through support for per-file locking, faster replication and access to LDAP.

AccuRev 4.5 allows global teams to handle SCM needs across builds within their IDE, according to the company.

The company has released free plug-ins for Eclipse, IntelliJ, NetBeans and Visual Studio 2005, which according to Cliff Utstein, AccuRev's vice president of marketing, allow the user to run diff and merge tasks from within those IDEs. Also added is a wizard that can create a new project tree within AccuRev's repository without requiring the user to exit the IDE.

On the server side of the product, version 4.5 offers more in the way of component reuse and symbolic link capabilities, according to Scott McGrath, senior product manager. A library used in one source tree can now be linked to in another, eliminating the need for multiple copies of the same library or code files, he said. This should help to eliminate the problem some development houses have keeping version numbers straight for parallel development projects, McGrath added.

Another feature intended to help parallel development teams is per-file locking. "If you want to manage a set of files serially within a parallel developed project, like documentation," said McGrath, "you can manage [access] as a file property. We've had the ability to lock [directories] but not on a per-file level." This, said McGrath, means developers can lock down a single file from being accessed or modified, rather than having to lock down entire directories or development trees.

AccuRev 4.5 costs US$795 for the professional edition and $1,495 for the enterprise edition, which adds new change packages designed to give developers an easier path toward rollbacks. When code is checked in, said Utstein, changes should be associated with outstanding issues. With change packages, developers can quickly associate their code changes with entire selections of issues related to a single feature or portion of the program. "This supports parallel and agile development by making rollbacks trivial from a code check-in perspective," added McGrath. When rolling back changes, all the code changes associated with a single feature can be pushed back in one step.

Elsewhere in AccuRev 4.5, the company has expanded LDAP support and now supports Mercury Quality Center. These so-called AccuBridge optional support packages cost $4,995 each.

Replication of AccuRev SCM databases should be much faster in version 4.5, said Utstein, thanks to AccuReplica 4.5, a rewritten version that McGrath claimed can replicate as much as four times faster than the previous version. AccuReplica also now allows users to replicate AccuRev source trees remotely. Sold separately, AccuReplica costs $495 per named user or $9,995 per server. ▮

Urbancode Breathes Life Into Builds

Claims 'living builds' can handle multiple processes, reuse artifacts

BY DAVID RUBINSTEIN

Coming soon to a screen near you…The Night of the Living Build.

And according to producer Urbancode, it's anything but a horror show. In fact, the company claims living builds can ensure that software releases can live happily ever after…at least until the next revision.

The concept of living builds was to be introduced with the Sept. 13 release of AnthillPro 3, the latest version of the company's build management server. "A traditional build is a single event in time, to which you cannot add new processes," said Maciej Zawadzki, president of Urbancode. "If [the build] didn't do a deployment, you can't go back and make it do a deployment" without having to start a whole new build from the source code, he said.

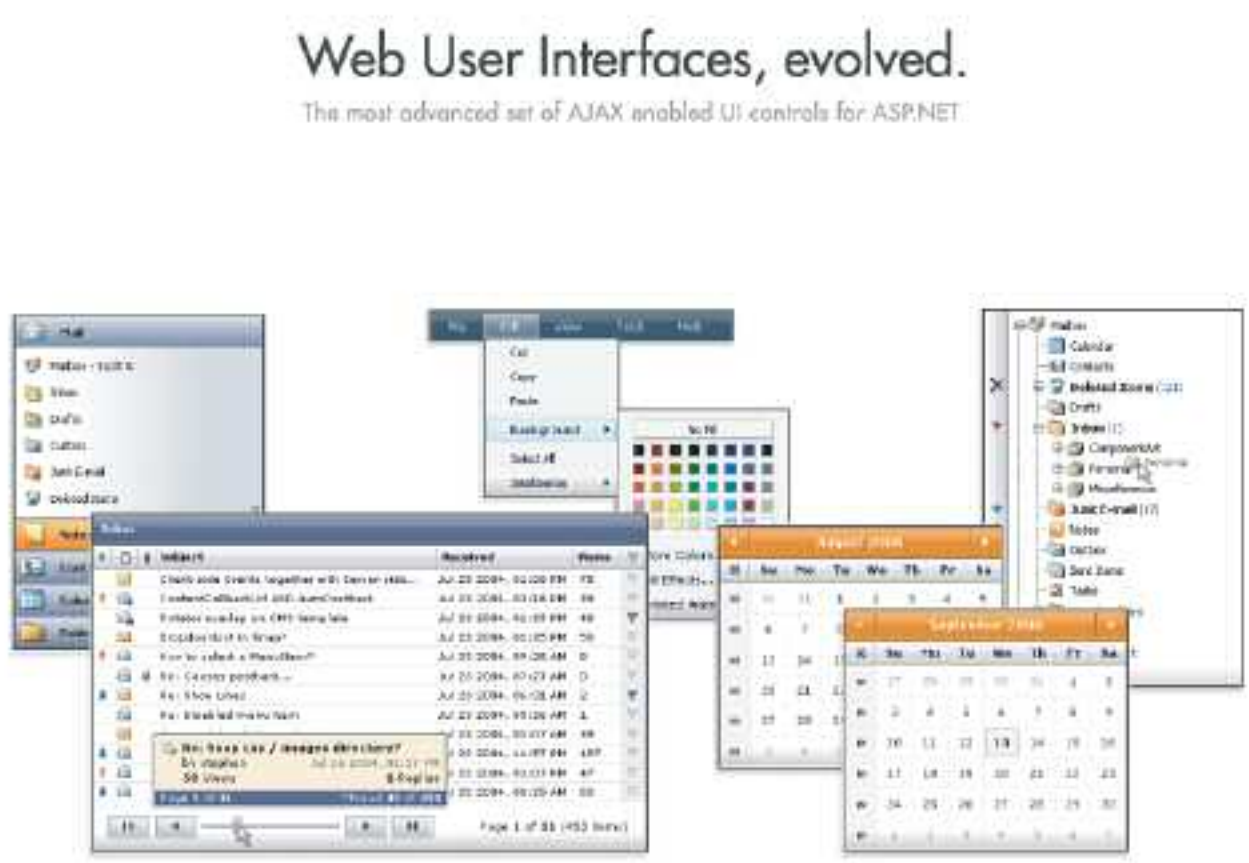
To overcome this shortcoming, Zawadzki said the industry created build types, such as continuous builds, which take the source code and run JUnit tests, for example, or a nightly build, which could add functional testing. Then there are release build types, which assign version numbers to the project and deploy to a number of servers. "This," Zawadzki said, "is far from ideal." The artifacts being tested are not the artifacts being deployed, because each build requires going back to the source code, which can introduce errors, he said.

NO GOING BACK

Urbancode's approach in AnthillPro 3 is to create artifacts from the source code, which then can have any number of processes run against them without having to go back to the source code each time. With the latest release, users can create diagrams that represent the states that the builds have to go through in order to get the artifacts from development into production, Zawadzki explained. These status groups play an important role in dependency management and allow the artifacts to be reused, he said.

"Whenever I build an order entry," he cited as an example, "I can also take the latest production artifacts from another project called 'order,' or from a project called 'customer.' Or, I can say to use version 3.5 of the order project, and 3.5.7 of the customer project." This provides traceability that organizations can use when forced to meet regulatory or industry requirements. Further, every build request is logged, easing the audit process, he said.

AnthillPro 3 also can use the company's proprietary CodeStation to manage the configuration of third-party artifacts, Zawadzki said. Integrations with IDEs allow developers to become more involved in the build process, he added. ■



Goodbye, WinFX, Hello, .NET 3.0

BY P.J. CONNOLLY

When Windows Vista's first release candidate came out last month, it had more for developers than an eye-candy interface: Windows Vista RC1 includes the first release candidate of Microsoft's .NET Framework 3.0, formerly known as WinFX.

The third major version of Microsoft's code execution environment will run on Windows XP and Windows Server 2003, as well as Windows Vista when it becomes available next year, and undoubtedly Longhorn Server, when it finally ships. Although Microsoft is not yet supporting .NET 3.0 applications, it is offering its customers the option of a so-called "Go-Live" license that permits production use in limited circumstances.

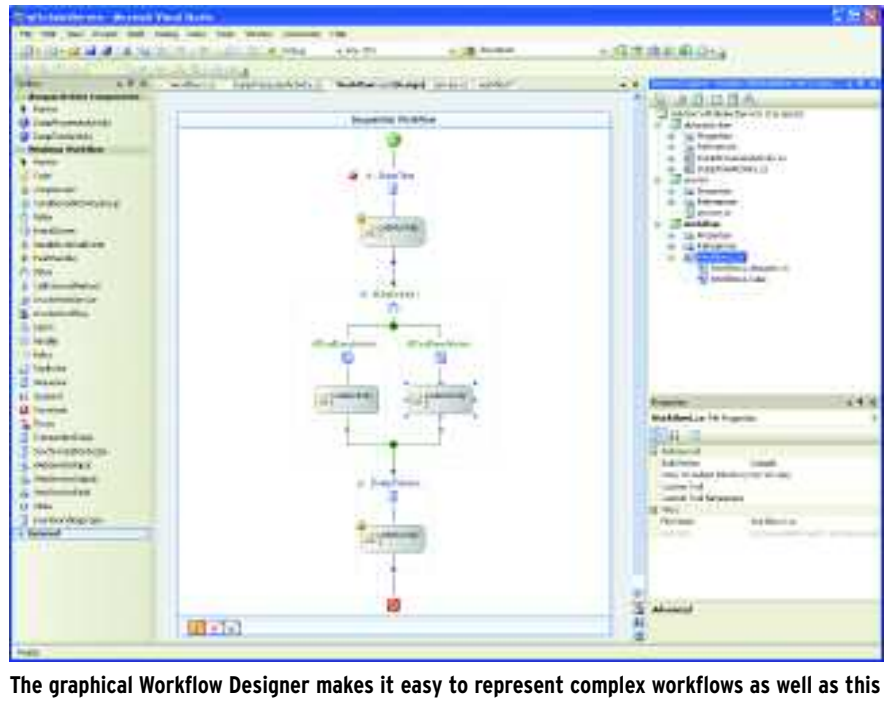
Four core technologies make up .NET Framework 3.0: Windows CardSpace (ex-InfoCard), Windows Communication Foundation (WCF, ex-Indigo), Windows Presentation Foundation (WPF, ex-Avalon) and the Windows Workflow Foundation (WF, presumably to avoid confusion with pandas or wrestlers). All of them were written in C#, which Ami Vora, product manager for .NET Framework 3.0, characterized as a demonstration of Microsoft's commitment to managed code.

CardSpace is Microsoft's latest attempt at digital identity management, using the metaphor of an "information card." Cards represent digital identities of users, who interact with them through a visual interface. Identity providers generate these cards containing information about the provider, the security tokens the provider issues, and the security levels associated with the tokens. Relying parties such as merchants use WS-SecurityPolicy and WS-Trust over WS-MetadataExchange to interpret the tokens supplied by the CardSpace instance on the user's machine to configure access and privileges.

Windows Communication Foundation is the glue that connects service-oriented applications with managed code, supplementing lower-level network protocols to provide reliable and secure communication between applications. WCF relies on SOAP and text-based XML as its usual means of communication, but WCF-WCF conversations can use an optimized mode that follows the SOAP data structure, but replaces angle brackets and text with a binary representation of the SOAP message.

Windows Presentation Foundation focuses on the shiny stuff that users see, but it's more than just a flashy replacement for the Win32 graphics subsystem. WPF was designed to take advantage of modern hardware, allowing UI controls to share screen real estate in ways that were impossible with the Win32 model. Most notably, WPF embodies declarative programming, describing what the application should do on the screen, rather than how to do it.

Microsoft intends Windows Workflow Foundation to eventually replace the islands of workflow technology found in products such as BizTalk Server, Exchange and Windows SharePoint Services. WF provides a library of basic activities that define workflows, a rules engine, and support for communication over Web services. Developers can write up workflows in code, or use the Workflow Designer in Visual Studio 2005 or another environment. ▮



The graphical Workflow Designer makes it easy to represent complex workflows as well as this simple one.

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VQMS: Managing the Virtual Test Environment

Surgient's update lets test teams schedule tests, reserve VMs, servers

BY DAVID RUBINSTEIN

Virtualization has allowed the art of testing to advance, as fewer machines are needed to run multiple environments in which to test an application before it goes into production.

But setting up and tearing down those virtual test labs has lengthened test cycles, and created a complexity that often forces companies to put off testing until after the application is released.

To help relieve this problem, a company called Surgient is set to release on Oct. 2 version 5.0 of its Virtual QA/Test Lab Management System (VQMS), with advanced management features and better scalability.

"Our software creates and provisions [test] environments," said Erik Josowitz, vice president of marketing for Surgient. "Virtualization got its start in unit testing, keeping sandboxes on developers' machines. But it hasn't been convenient for complex applications."

'THE BRAIN' IS IN CONTROL

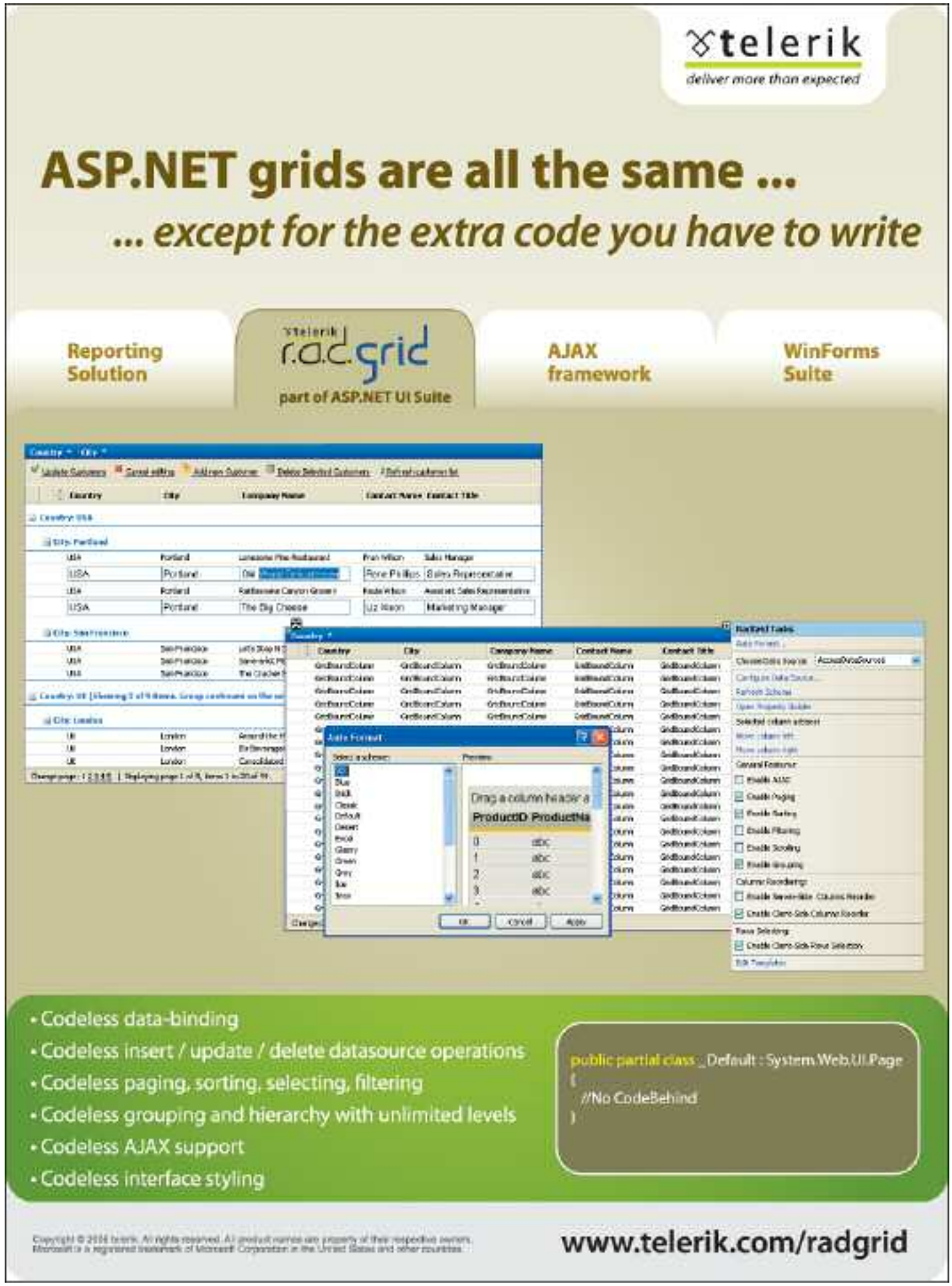
At the heart of Surgient's VQMS solution is a control server—"the brain," Josowitz said—that understands scheduling and can determine the number of servers available for reallocation of the virtual lab software. A second part is the library of application configurations, which Josowitz described as "a database of VM images…where they live, what's in them, what operating system they're running." These pieces require a resource pool of servers running Microsoft or VMware virtualization software with Surgient's control agent also running on them. Josowitz said VQMS does not support Xen because that software is "not quite there yet" for large-scale commercial installations, but noted that support could be added at any time if the demand is there.

The test team logs into the Surgient software via a portal and makes requests for a number of configurations, and then the software reserves space on the resource pool machines to meet the necessary capacity, and provisions the virtual machines on those servers, Josowitz explained.

An integration with Mercury's Quality Center lets developers look at application failures as they happen, negating the need to recreate bugs in a lab environment to rectify those issues, he added.

The latest release of VQMS can now handle thousands of machines running hundreds of configurations that need to be managed all at once. Prior versions could only handle hundreds of machines at any given time, Josowitz said, and was not as scalable for larger organizations. VQMS 5.0 also comes with SOAP and XML Web services interfaces for advanced integration with reporting and testing tools.

Josowitz said Surgient is positioning the solution as "IT as a service," in that "folks request what they want and it's delivered." ▮



Lisa Dresses Up for Continuous Testing

iTKO tool upgrade now features dashboard for metrics, configurable notification

BY DAVID RUBINSTEIN

In a services world, organizations build their applications using externally created and managed components that change without their notice or approval, or that stop being upgraded, or that have unseen dependencies that can break an application.

Or, even within one company, there could be a mandate that it no longer is acceptable for each unit to maintain software similar to that being used and maintained in a different unit. Suddenly, one group is forced to face the problem of depending on software that other people manage and control.

So, an organization might deploy its application only once per year, but a Web services component of that app might be updated six times during the year. This creates testing issues for the organization releasing the application.

Into this scenario comes iTKO, which is defining a practice it calls continuous testing. "Testing is no longer an event along a static life cycle," said iTKO founder and chief architect John Michelsen.

Michelsen said the "five nines" of application availability is actually a product of system uptime, application availability and—from a business perspective—functional integrity. The first two, he noted, can pretty much be automated to ensure uptime. The last one, though, is as critical to business as the first two. "Apps had better deliver the business functionality, or it's downtime," Michelsen said.

iTKO is expected on Oct. 2 to release version 3.5 of its Lisa automated testing platform, with more emphasis on managing continuous testing. New dashboard functionality has been built in so users can schedule tests, set, record and analyze pass/fail metrics and get other application data in a customizable format that makes the data most useful.

NOTICE OF FAILURE

Lisa 3.5 also now provides configurable "on failure" notification. "In a continuous [testing] service, various people need to be notified," Michelsen explained. A functional test, for example, might fail, in which case both the developer and the business analyst who wrote the requirement would be notified.

A key to this kind of testing is to do the tests on the entire deployed application, Michelsen noted. "Usually you just test your piece of the app, not the whole millions-of-lines-of-code app," he said. But with applications built from services, which are changing all the time, the application has to be checked at runtime to ensure business continuity and functional integrity, he maintained. "Now," Michelsen said, "it's important to associate between the [application] staging and runtime areas. You must ensure functional integrity at runtime." ▮

With Packages in Place, EPF Is Ready for Review

Eclipse process project includes authoring tool as well as examples of best practices

BY DAVID RUBINSTEIN

With requirements and change management packages having been delivered, the Eclipse Process Framework version 1 was expected to get into release review Sept. 27.

The EPF was created to help process authors—the people who define how software gets developed in their organizations. It also will provide foundational or exemplary processes that users can build new processes upon, according to Kurt Sand, a senior solutions manager at Telelogic and an EPF committer.

The EPF consists of two parts. There is a tool for authoring and publishing processes—"You can author any process you want, and define who does what when, and what artifacts they produce," said Sand—and Open Unified Process version .9.

OpenUP has grown out of an IBM donation to Eclipse of its Basic Unified Process. OpenUP Basic is the first release of what Sand expects will become a family of processes, when parties with other interests create subprocesses for such things as agile or test-driven development.

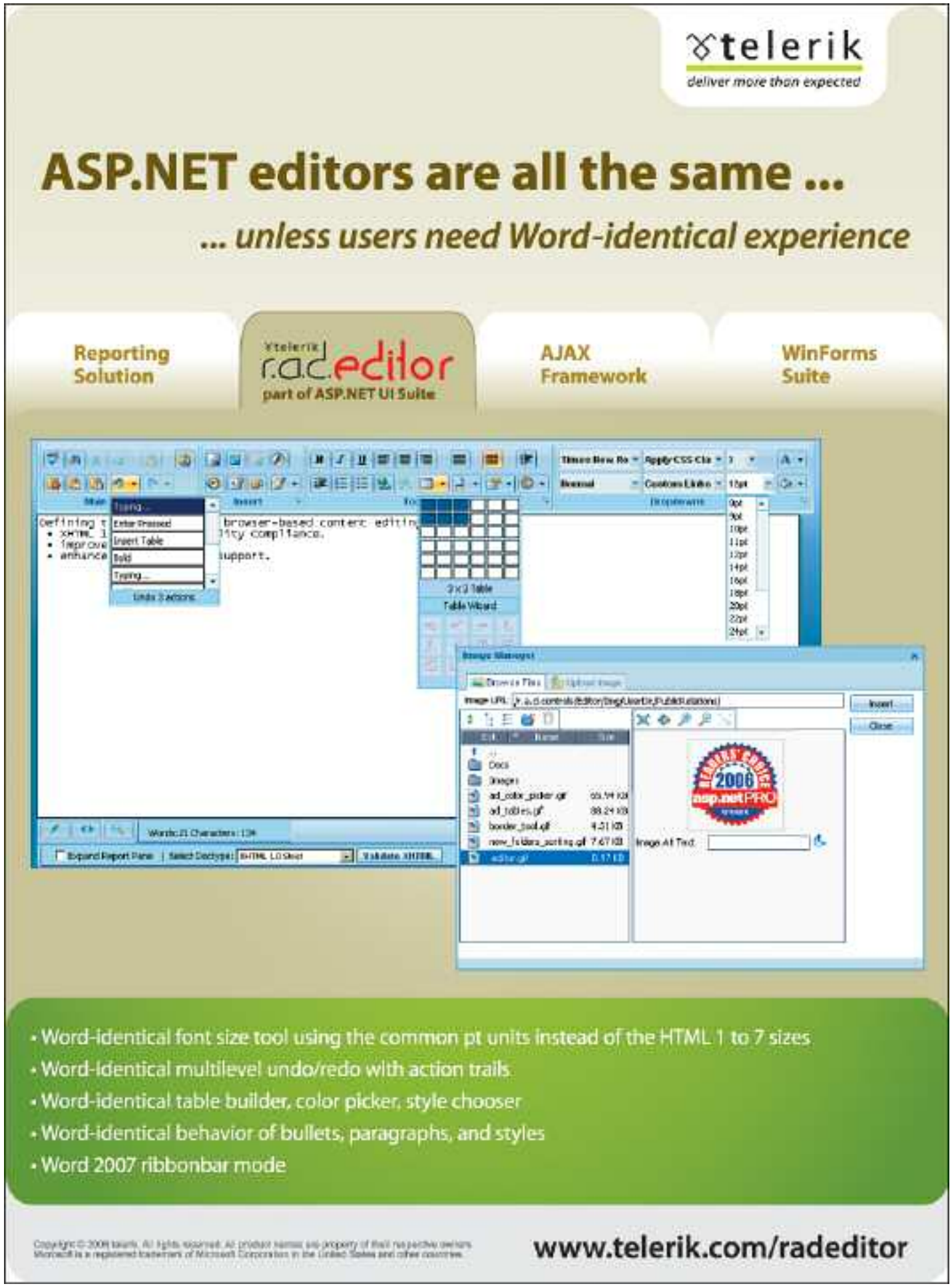
OpenUP Basic includes the requirements and change management packages contributed by Telelogic, as well as processes for analysis and design, implementation of code, testing and project management, explained Chris Sibbald, a senior systems engineer at Telelogic and also an EPF committer.

While it might appear there is overlap with the Eclipse Application Lifecycle Framework project, Sibbald instead said they are very much complementary. "ALF is designed to bring point tools together for life-cycle development, while EPF is about giving life-cycle know-how," Sibbald said. Telelogic, he said, is not active in the ALF effort at this time.

Noting that many organizations reject having rigid processes forced upon them, Sibbald said the philosophy behind OpenUP is to be minimal, complete and extensible.

Sand added, "Other process frameworks took a subtractive approach, saying, 'Just throw out what you don't need.' We've taken an additive approach." Sibbald said there are six basic roles defined in OpenUP Basic, as well as about only 20 tasks and a similar number of artifacts. "We discuss the need for traceability, but don't go into detail. You might want to bring in a package with more content," Sibbald said.

Sand said the project team was careful with dependencies to keep the process framework extensible. "We put mechanisms in place to configure a library of best practices for your application. You can pull out the requirements package, for example, without breaking the change management package." ■



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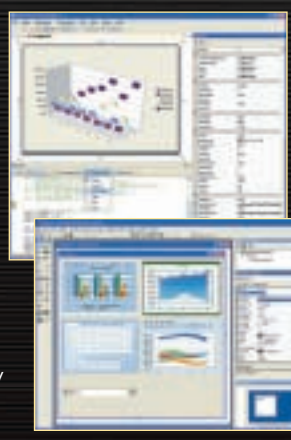

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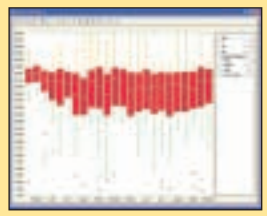

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Google, HP, UNLV Revive OCR Tool as Open-Source

BY ALEX HANDY

HP and the University of Nevada at Las Vegas have finalized a coding project designed to bring a 10-year-old optical-character-recognition tool into the open-source community. The tool, named Tesseract, was also polished and cleaned up with the help of some folks at Google, and is now available freely on SourceForge.net.

Tesseract began life at Hewlett-Packard in 1985. In the 1990s, the tool won high praise at a UNLV-sponsored event pitting competing OCR software against one another, placing in the top three of the competition. But HP soon decided to get out of the OCR market, and in 1995, Tesseract was shelved.

Despite its age, Tesseract has nothing on the original OCR technology, which was patented in Europe in 1929. The original system used a series of letter-shaped cutouts and a photo sensor to read characters. When the proper letter cutout was placed over a printed letter, a light shining behind the cutout would be blocked out only by the proper character. Thus, when the photo sensor did not detect any light at all, the letter was judged to be recognized properly.

In the 1950s, the first digital OCR system was created by David Shepherd, who went on to found the Intelligent Machines Research Corp. to market a machine built to digitize paper documents.

More recently, developers at UNLV and HP decided to pull Tesseract out of deep freeze to release it as open-source. Some of the big brains at Google were tapped to help fix up the code, thanks to that company's extensive experience with mass text digitization.

Tesseract is clean and functional, according to Google's blog, but the tool is not yet capable of recognizing multicolumn text layouts. Also, it now supports only English, and does not deal well with colored paper or grayscale printed text. ▮

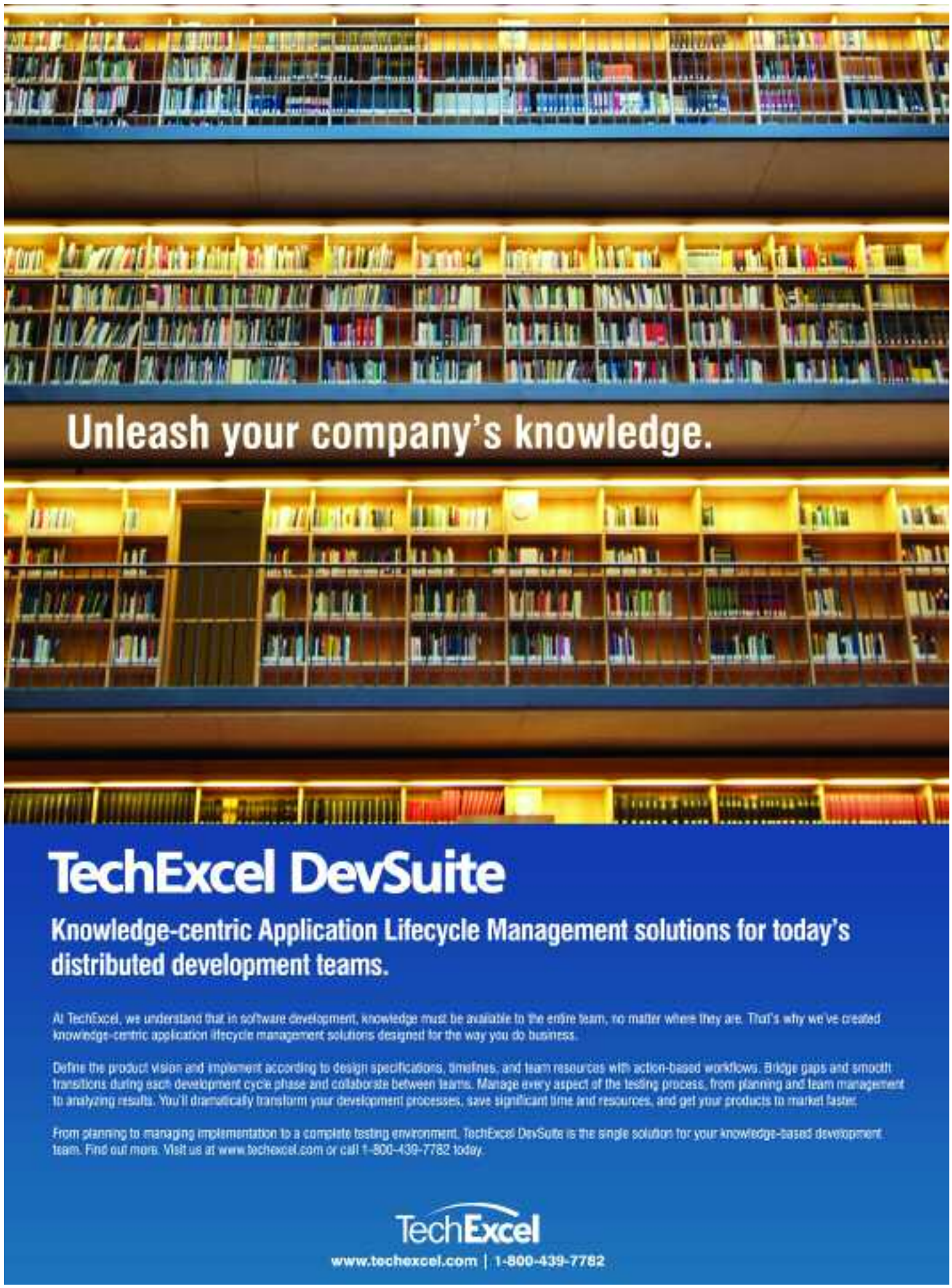
Blueprint Supports UML 2.1

BY DAVID RUBINSTEIN

Amsterdam software maker @-portunity (www.atportunity.com) has released what it's calling the first commercial UML 2.1-compliant modeling tool on the market, based on the Eclipse platform. The Blueprint Software Modeler supports Use Case, Class, Activity, State, Package and Component diagrams, with other UML diagrams to be supported soon, according to the company.

@-portunity claims that Software Modeler is the first application in a series that will make up something it is calling the Blueprint Modeling Framework, which will have the ability to accept plug-ins to add application life-cycle functionality such as managing requirements. Plug-ins that are currently under development include Meta Modeling Facility and an OCL editor.

A no-cost Community Edition is available; the Professional Edition can be extended with plug-ins and uses multiple Eclipse projects. ▮



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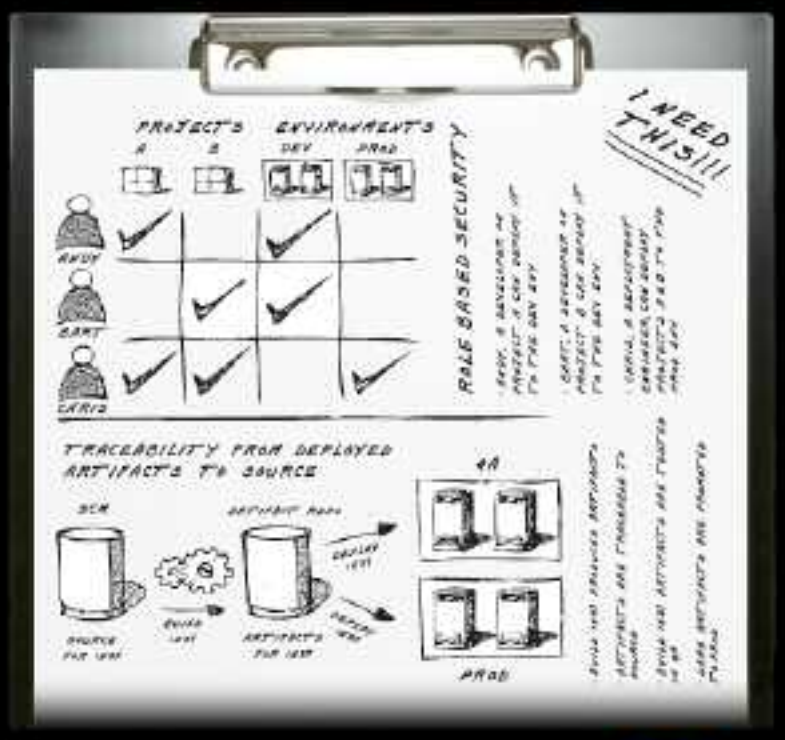

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IronPython 1.0 Work Complete

While not perfect, Microsoft's newest language is faithful to .NET

BY P.J. CONNOLLY

Implementing dynamic languages on the Common Language Runtime may get easier after a fair amount of skull sweat from Microsoft's IronPython development team, which has finished work on version 1.0 of Python for .NET.

Jim Hugunin, founder and lead developer of the IronPython project, isn't shy about what he and his team have accomplished: "What IronPython does, is it's shown that you can run dynamic languages extremely well in .NET, and you get…integration with all the .NET libraries."

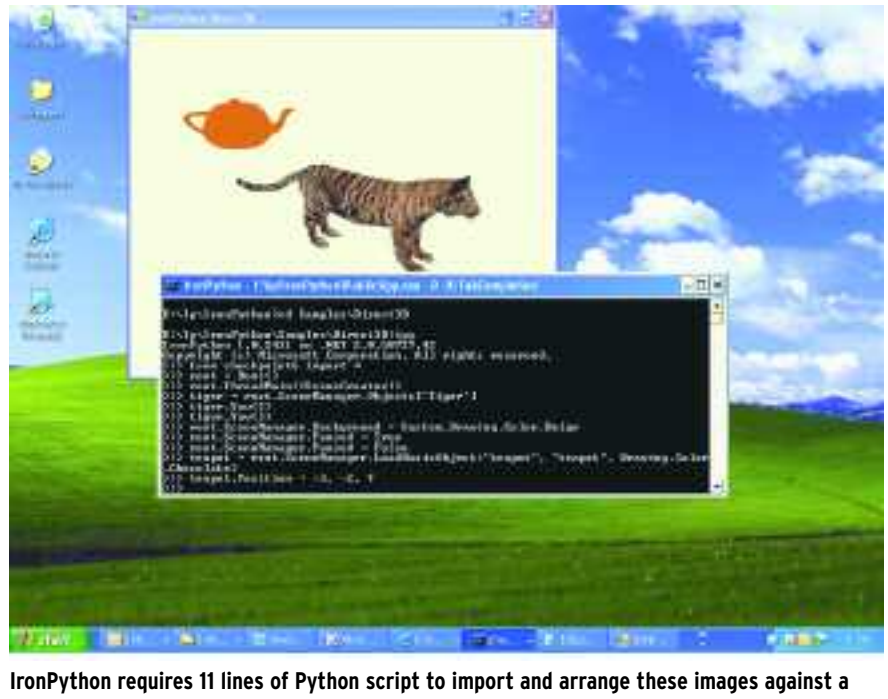
Hugunin started work on IronPython a little more than three years ago, and confesses freely that he began with the intent of demonstrating that .NET was a terrible platform for dynamic languages such as Python. He has devoted the years following his initial assessment to refining the IronPython implementation. As it turned out, "the most interesting place to keep working on this was [at] Microsoft." Hugunin signed on with the company two years ago, with the express intention of shaping the CLR's evolution to better support dynamic languages in general, and "to figure out what we can do at the runtime level, to make it easier for folks."

IronPython, unlike most Microsoft products, began as an open-source project and is released under a shared-source license. Hugunin characterized the license in the release notes as "BSD-style," although it has not been blessed by the OSI. Otherwise, developers are free to build on the software, without receiving patent rights on derived works.

The initial release of IronPython requires .NET 2.0 for simplicity's sake, according to Hugunin. He preferred to keep the release simple and use workarounds such as so-called "#ifdefs" to add support for future versions of .NET, instead of obsolete ones.

Hugunin and his team aimed to make IronPython 1.0 compatible with CPython 2.4.3, the C-based version, although certain 2.5 features, including all-any-max-min operations with a key argument, string partitioning, ternary expressions and statement support, did make it into Microsoft's package. A number of extension modules from the C-based implementation don't have equivalents in IronPython, so functions such as "import bsddb" simply don't translate, Hugunin admitted in the release notes. As a consolation, he noted that IronPython allows the use of any and all .NET-compatible libraries from inside Python code.

Some other variations from CPython exist in IronPython; perhaps the two most notable—because they're unlikely to be fixed—are IronPython's use of an error message when invoking very large exponents, instead of CPython's tendency to "hang-while-computing," and some behavior differences in how the compile function handles trailing white space. ▮



IronPython requires 11 lines of Python script to import and arrange these images against a custom background.

Is BlueNote's SOA VoIP Sending IT a Busy Signal?

The all-software PBX ties a company's Web services to its phone system using browser-based tools.

BY EDWARD J. CORREIA

For most companies, the extent of their PC-telephony integration, if any, is a link between incoming caller ID data and a contact list, which displays who's calling on their monitor.

Despite technology that's been around for more than a decade, few companies deploy business applications that are integrated with their phone systems.

"Usually it's hard and expensive to implement, and involves proprietary technologies," asserted Mark Ericson, director of product strategy at BlueNote, which late last month unveiled SessionSuite SOA Edition, a middleware solution he said provides an easy way to connect a company's existing SOA-based applications with a new or existing phone system.

The company also introduced SessionSuite SOA Edition and SDK, a US$2,000 tool set that includes sample WSDLs and programs that developers can modify with their existing IDE. The SDK also comes with a nondeployment runtime for application testing. When ready for deployment, companies purchase SessionSuite SOA Edition for $250 per user.

Earlier this year, the 2005 start-up premiered with the like-priced SessionSuite Enterprise, an all-software VoIP system positioned as a full-featured PBX for small and medium-sized businesses. All products are administered through a browser and run on Red Hat Linux Enterprise 4. Also new is SessionSuite Desktop, a companion phone control app for Windows that integrates with Outlook and is accessible through a browser.

The SOA edition runtime, Ericson explained, exposes telephony applications and capabilities through Web services APIs, including functions for initiating, handling and forwarding calls. Telephony features can be embedded within new or existing applications, he said, or can trigger other events.

"For instance, when a call comes in, it might cause a screen popup to allow [the user] to choose whether to record, block or intercept the call," said Ericson. A legal office might use such screen pops, he continued, to decide whether an incoming call might be billable, in which case a billing timer could be invoked.

PUTTING IT IN CONTEXT

Sally Bament, BlueNote's vice president of marketing, described another application in which companies might integrate with existing interactive voice response (IVR) or Web-based systems. "We can provide context such as customer name, which Web page they came in through and the agents previously on the call, so that the customer doesn't have to repeat all that multiple times," she said.

BlueNote claims compatibility with PBXes from Avaya, Cisco and Nortel, as well as any others that support a PRI interface, "and 99 percent of PBXes support that," claimed Bament. The older Telephony API (TAPI) is not supported, she said. "We're moving away from that model, as is the industry in general," added Ericson, "but we can work with any off-the-shelf VoIP or SIP devices," he said.

Ericson said that while some of the functions provided by BlueNote's products also are standard issue with solutions from Avaya and others, "they don't offer the value of becoming part of the SOA. And by implementing [apps] as a Web service, [that logic] can be reused across departments." All the tools are available now. ▮

Compliance Platform Taps Into Archives

Black Duck's protexIP 4.0 adds analysis tools and simplifies reporting

BY P.J. CONNOLLY

Black Duck Software took advantage of last week's Gartner Application Development Summit in Phoenix to announce the latest version of its protexIP software compliance platform, which allows customers to track the provenance of code and components, and avoid inappropriate use of licensed code.

protexIP 4.0 adds tools that perform dependency analysis and archive analysis against the protexIP KnowledgeBase, which contains code signatures of distribution packages from software publishers and open-source projects. The repository also contains signatures of the component files within those packages, making it easier to track code reuse. The new version enables the inspection of archived files for stray bits of code. Customers can even add signatures for their own codebases to the protexIP KnowledgeBase, if desired.

Other features in protexIP 4.0 focus on usability. A new executive dashboard allows users to observe at a glance the status of all review projects, and reporting is enhanced and simplified. Enterprise users can turn to the KnowledgeBase for information such as the exact wording of software licenses, even at the component level.

This so-called "Precision" technology allows users to filter out results that may not be relevant to the particular code review. A hypothetical example provided by Jim Berets, Black Duck's product management director, uses a foo module from the Apache Web server that gets picked up by a dozen or more projects. Instead of flagging separate instances for those individual projects, the "Precision" tools can recognize that they all derive from the same Apache foo module.

Annual subscription pricing for the basic version remains at US$9,000; the enterprise version adds license management features and costs $25,000 per year. A so-called "on-demand" option aimed at auditors and smaller shops allows for project-based use of the protexIP infrastructure.

Current customers of the service should have access to the new version around Nov. 15, according to Black Duck CEO Doug Levin.

30 MILLION+ SIGNATURES

The new release wasn't the only thing keeping Black Duck busy this summer: At LinuxWorld in August, the company announced that it had added more than 30 million software component signatures, from more than 1,000 vendors, to KnowledgeBase's inventory of licensed code artifacts. Also at that time, Black Duck unveiled a unique arrangement with Dr. Dobb's Journal and its sister publication, C/C++ Users Journal, to add their binary and source code samples to the repository. ▮

Seapine Tackles Test Case Management

BY DAVID RUBINSTEIN

It's one thing to be able to track tests. It's entirely another to be able to manage myriad test cases, across platforms, in the context of a workflow, and with traceability.

Seapine Software's release this month of TestTrack TCM is designed to give QA professionals better control over their test cases and test runs, according to Rick Riccetti, president and CEO of Seapine.

As part of its application lifecycle management suite, Seapine this month also is expected to release an update to its Surround SCM configuration management software.

TestTrack TCM keeps all information about tests in one repository, so users can determine that tests were done, what was tested, who performed the test and when, on what platform, under which configuration and in what language. "This has a focus on ALM; it's not a point solution," Riccetti said. "If you have 3,000 test cases and you want to run four or five hundred, you should be able to calculate how long it will take, or make decisions and change your strategy about testing."

Riccetti also explained that if an application fails, users can trace a defect back to a change in source code, or they can create a test case from the defect, to plug the apparent hole in the test plan.

TestTrack TCM integrates with Seapine's TestTrack Pro defect and issue management software to form TestTrack Studio, though each is sold separately. It also integrates with the company's QA Wizard to manage automated scripts and capture data. This, Riccetti said, would help facilitate an organization's move to automated testing.

SURROUND SOUND

Seapine's Surround SCM shared features with many of its competitors—check-in/check-out and branch and merge, among others. But with the release of version 5 on Oct. 5, Seapine is rewriting how it deals with event triggers, Riccetti said.

"Beyond knowing a user has a file checked out, a user can apply states and a workflow to a file. For instance, if I have a policy that all code must be reviewed before going into a build, I can create a 'not code-reviewed' state that would prevent that code from being put into a build," Riccetti explained. The workflow, he added, is customizable.

By the same token, if a file is marked "code-reviewed," but someone else checks it out and modifies it but doesn't have it reviewed before checking it back in, the software can automatically change the state back to "not reviewed," he noted.

Pre-event triggers help validate such things as the code being in the proper state, or that there is a copyright statement on top of the file, before code is checked in to the repository. Post-event triggers involve such things as notifying stakeholders of a change of state of an item at check-in, for example. "The triggers look similar to Outlook processing e-mail," Riccetti said. "You go through a set of rules and figure out which ones to apply." ■

g-Eclipse to Put Eclipse on a Grid

Potential for ties to DSDP's TM project for node management

BY EDWARD J. CORREIA

Finally, a group of companies is working toward a realistic way to unify grid computing technologies. A proposal to develop and manage grid technologies for users, operators and developers using Eclipse was posted in late August.

Since then, there has been interest in tying the effort in with the Target Management project, a subproject of Wind River Systems' Device Software Development Platform. Early postings on the g-Eclipse project's newsgroup inquired as to the utility of previous work on node communications done in the TM project.

Other developments include an agreement by participants in the project to attend the EGEE 06 conference Sept. 25-29 in Geneva to "strengthen the collaboration with the [Enabling Grids for E-SciencE] project," according to a post at the project's Web site by g-Eclipse project lead Harald Kornmayer, of Forschungszentrum Karlsruhe, a German science and engineering consultancy. He also expects to conduct a "fruitful discussion with the gLite middleware developers."

As proposed, the so-called g-Eclipse project would begin with support for gLite/LCG, the lightweight middleware in use at the Large Hadron Collider Computing Grid in Geneva. The LCG is said to be the largest computing grid in the world, and is part of the EGEE project funded by the European Union.

By using Eclipse's framework and tools approach, the proposal further suggests that g-Eclipse be extensible to support Unicore, GT4 and the myriad other grid computing protocols in use today.

A tentative timeline for the project calls for basic implementation of an integrated grid environment and first implementations of plug-ins for the gLite middleware to be ready by the end of this year. In June 2007, the initial API would be provided, along with additional gLite middleware plug-ins. By the end of next year, projections call for support for a second (unnamed) grid middleware, which would validate the frameworks and API. General availability of version 1.0 would be June 2008.

So far, parties from Austria, Cyprus, Germany, Poland and the United Kingdom have expressed interest in g-Eclipse. The project committers have proposed a major set of "core grid plug-ins" for grid job and application management and monitoring, grid file management, benchmarking and deployment, visualization and workflow and organizational management, including authentication and remote-user authorization.

The complete proposal is at www.eclipse.org/proposals/g-eclipse, along with a link for posting feedback to the g-Eclipse project's newsgroup. ▮

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Borland Brings Modeling Together With C++

BY DAVID RUBINSTEIN

Continuing to straddle the fence between development and life-cycle tools, Borland Software last month announced an update to its Eclipse-based Together 2006 UML modeling tool with the new ability to model C++ applications.

The C++ capability includes Borland's C++ LiveSource, which keeps code and models in sync, as well as C++ design patterns and source code metrics.

Also new is an integration with Borland's requirements definition tool, Caliber DefineIT, which will allow developers to create systems using both the Unified Modeling Language and the Business Process Modeling Notation. The integration also provides business people with the ability to define and visualize business as well as technical requirements, according to the company.

Together 2006 for Eclipse works in the Eclipse 3.2 framework. Borland said it will continue to invest in the Eclipse Modeling Project as the basis for future releases of Together, even as it touts Together as a key piece of its Core ALM solution. The company plans to divest itself of its IDEs within the next few months, but also indicated those tools would be integrated with the Core solution. ▮

Web Services Management Spec Gets OK

BY DAVID RUBINSTEIN

The OASIS consortium last month gave its approval to Web Services Distributed Management, a specification that defines how management applications can be built from Web services.

WSDM 1.1, which consists of Management Using Web Services (MUWS) and Management of Web Services (MOWS) specs, also integrates the W3C's WS-Addressing and OASIS' WS-Resource Framework and its WS-Notification specs, according to the organization.

"WSDM serves as the start point for using Web services to solve the management integration challenge," WSDM technical committee chair Heather Kreger said in a statement. "It addresses two primary functions—how to use Web services to perform management tasks and how to manage the Web services themselves."

The MUWS specification defines a basic set of manageability capabilities, such as resource identity, metrics and configuration, that can be used in dashboards and other management instruments, while MOWS defines how to manage Web services as resources, according to an OASIS news release.

"The WSDM OASIS standard will significantly enhance interoperability among enterprise management applications, enabling IT organizations to optimize service levels and reduce operational costs," CA's Wily division senior architect Paul Lipton said in the release. ▮

SGI Grants a Stay of Execution to IRIX

Shipments to end in March 2007; support to run through December 2013, says company

BY P.J. CONNOLLY

IRIX, and the Silicon Graphics systems it runs on, received another two years' lease on life last month. The company had planned to end production this year of its MIPS-based hardware and its accompanying IRIX operating system, which would have started a five-year clock to the earliest possible end of support.

Instead, Silicon Graphics (SGI) confirmed that general availability for MIPS IRIX systems will end on Dec. 29, with shipments no later than March 2007. However, so-called "special needs" customers can enter into an agreement to extend availability to the end of 2008. At the same time, the company confirmed that IRIX development, except for P1 bug fixes and security patches, will cease with the current release, version 6.5.30. Hardware and software support will end no earlier than December 2013.

Although it appears the final nail won't be pounded into IRIX's coffin until 2014 at the earliest, the announcement is the latest blow of the hammer in a process that began on paper eight years ago, when SGI revealed plans to drop its own MIPS CPU in favor of Intel's Itanium CPU family.

However, repeated delays in Itanium development forced the company to scramble and design more generations of the MIPS processor than planned, and the first Intel-based SGI systems didn't ship until 2001. SGI's customers have coped with a moving target for application development, as newer systems running Linux and Windows NT didn't quite replace the MIPS hardware and IRIX in some scenarios.

Bob Ainsworth, SGI's senior director for remanufactured products, acknowledged that customer pressure, especially from government and other institutional users, was a substantial reason for stretching the MIPS platform's availability through 2008. His group took over the MIPS IRIX line about a year ago, anticipating last month's announcement.

"We've been delivering MIPS IRIX for 18 years, and we're committing to an even 20 years for new products," Ainsworth observed. "We're just going to do the last two in a very managed way" to meet the needs of OEMs and systems integrators, he said, adding that the requirements of these key customers essentially result in custom agreements.

Ainsworth expects that integrators and OEMs will need most of the time between now and the end of the year to determine the extent of the extended production requirements. "Many of their government customers are secure sites," he explained, so their shopping lists are on a need-to-know basis.

Ainsworth added that the current target was not necessarily a deadline for customers: "We are very likely to continue to support the MIPS IRIX platform, both hardware and software, beyond 2013." ■

Sources: Silicon Graphics, Ryan Thoryk's IRIX versions Web site (www.tliquest.net/ryan/sgi/irix_versions.html)

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Instantiations Enriches Rich Client Platform

Eclipse gets help tools, GUI tester

BY ALEX HANDY

Instantiations wants to help help. The company released version 2.0 of its RCP Developer tool for Eclipse in September, and it includes new features to help control and present help files for rich client platforms. Also new to this version is a functional GUI tester, and an installation wizard builder.

Dan Rubel, CTO of Instantiations, said that his company's rich client platform development environment is built on top of Eclipse's many collaboration capabilities. That means that developers using the new RCP help composer can collaborate on the creation and maintenance of help files and documents using Eclipse's built-in SCM tools. Once those files are in a usable form, RCP Developer 2.0 opens a window into the organization and layout of these files, said Rubel.

While the tool cannot yet import Word documents, Rubel dismissed this capability as unnecessary—adding it is functionality that Instantiations hopes to add in the future. This release, he said, "is currently focused on the inclusion of HTML-based content. You can already simply export Word documents as HTML, and, bang, there's your [help] page. Where we pick up is, if you are trying to tie together tens of thousands of HTML pages, Eclipse has a framework that—if you define all your metadata correctly—[will give you a] beautiful presentation of help in your program. Our job is to help you to validate your metadata and your links and content to help you reach that goal."

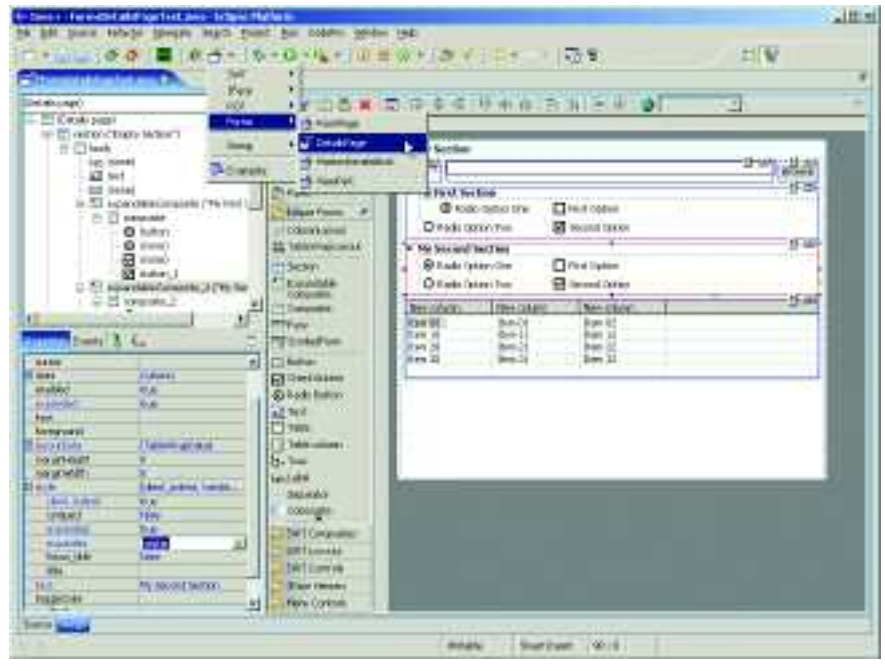
Thus, added Rubel, RCP Developer 2.0 offers facilities for testing and validating all of the ephemeral information encapsulated in help files. This makes the process of writing and maintaining help files significantly easier on large projects, he said.

Also added to this version of RCP Developer is a new functional GUI tester called WindowTester. The tool can be used to build automated GUI tests that can validate the functionality and accuracy of a graphical rich client platform.

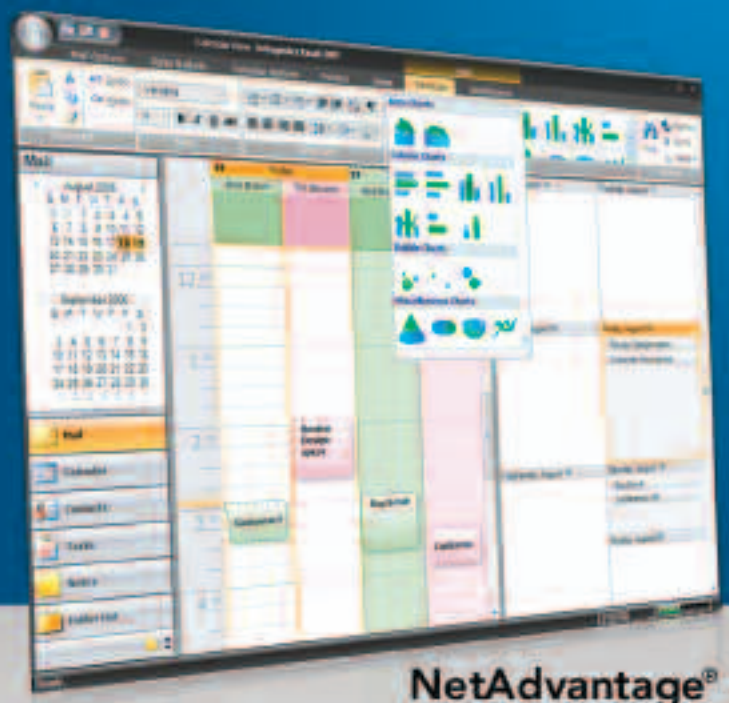
Further, in version 2.0, Instantiations is including an RCP Packager. The Packager gives developers a path toward building a graphical install wizard for either Linux or Windows. While such a packager is commonplace on the Windows side—most Linux distributions tend to favor distribution-specific installation files, such as the Red Hat Package Manager, or the Debian packaging system (.deb files)—Rubel feels that the graphical installations built by RCP Developer are more appropriate and versatile than standard packaging systems. He said that the RCP Packager gives developers a way to write their own installation code, rather than relying on the operating system's built-in tools, allowing developers greater customization.

Finally, this new version adds a reworked, RCP-centric version of Instantiations' SWT Designer. This GUI building system now supports top-level menu and window design, as well as a few more RCP-specific capabilities.

RCP Developer 2.0 is available now for Windows and Linux. It requires Eclipse and costs either US$199 per developer per year, or $499 for a standard one-user license. ▮



Instantiations' RCP Developer 2.0 adds new support for the testing and design of RCP GUIs.



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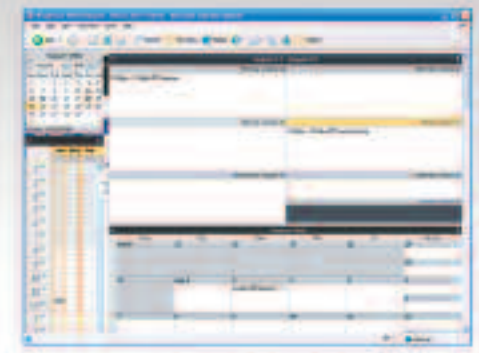

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IPswap Goes 'Little' in a Big Way

Components, add-ons make sense for developer marketplace start-up

BY P.J. CONNOLLY

Breaking down the barriers between developers and customers is always a challenge. IPswap is attempting to do just that with its namesake service (www.ipswap.com), which offers a marketplace for developers and end users. That itself is nothing new, but IPswap has staked out an arena that Guru.com, RentACoder and others have to date ignored: The "little things" of life.

The growth in software-enabled devices and the explosion of social networking sites provide what the company sees as an opportunity to make money off a lot of little transactions, instead of one big score. MySpace mods, ringtones and other phone add-ons, software for gadgets such as DVRs and iPods, and utilities for gamers are the meat of IPswap's site so far, although more professionally oriented applications can also be found.

But the site's not too fussy in its early days; packaged software and software-hardware hybrid products also appear in the inventory.

IPswap offers a way to commission software that doesn't exist yet, on a one-off or a royalty basis. The company takes a flat 15 percent rake-off on all transactions, and the site provides an auction facility where customers can bid out their ideas.

IPswap is looking at other ways of expanding its business; the company is exploring arrangements with as many as five universities to present student projects on the site as a way of measuring their market appeal, and perhaps improving the student's grade on the project. ▮

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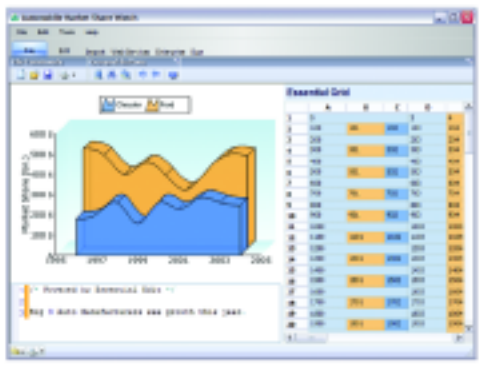

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Axure Prototyping Tool Adds Flow

BY P.J. CONNOLLY

Axure Software Solutions has released the latest version of its prototyping tool, Axure RP Pro, with new flow diagramming capabilities.

Axure RP Pro 4.2, aimed at developers that want alternatives to general-purpose diagramming tools such as Microsoft's Visio, now enables developers to model business processes, page flows and user scenarios as part of the application development process.

The new tool allows developers to define pages in the site map as flow diagrams and introduces flow "widgets" that represent connection steps in the flow diagram. Basic formatting controls combine with automatic connector routing to keep diagrams simple, according to the company.

Axure addressed another set of customer requests in RP Pro 4.2 by adding the new "OnPageLoad" event that drives an interface for editing page interactions. The new version also enables event simulation in prototypes, and allows the inclusion of event descriptions in RP Pro specifications. ▮

Atlas Won't Wait for Orcas

◂ continued from page 1

end Web server, will ship as the Microsoft AJAX Library, and will support non-Microsoft platforms. The server piece is now the ASP.NET 2.0 AJAX Extensions, and will be included in ASP.NET vNext. The server-side rebranding will affect developers: The tag prefix for the server-side controls will change, from <atlas:> to <asp:>. Meanwhile, the ASP.NET AJAX Control Toolkit—formerly the Atlas Control Toolkit—will continue to offer developers a set of free, shared-source components and controls for AJAX programming.

But in order to ship this year, some features in the current Community Technology Preview (CTP)—which have yet to be determined—won't be in the 1.0 release of the AJAX components. Microsoft expects to release an official beta and a release candidate before shipping, with core components on both client and server sides.

But even if some features don't make the cut for the first release, customers still have rights to implement them, as they will continue to be covered by Microsoft's "Go-Live" license. These won't be officially supported by Microsoft until they become part of the company's AJAX core, but are nevertheless available for use.

Brian Goldfarb, Microsoft's lead product manager for Web platforms and tools, explained why the company is embracing AJAX with such fervor. "What we've seen in the marketplace over the past 18 months is this increase in demand for building superior, expressive user experiences," he said, adding that "as business models commoditize, and everyone online is doing much the same thing, they need to differentiate themselves from the competition."

He continued, "The way we're seeing lots of businesses do that is through the experience they provide to customers, that relationship and overall good feeling you get, when you use specific sites." In Goldfarb's opinion, AJAX is one of the enabling technologies behind this movement. He observed that a number of enterprise customers have begun using the Atlas CTPs, and some sites are actually running them in production.

To Goldfarb, the Microsoft AJAX bits represent a departure from the company's perceived predilection to lock in customers to its entire product line. "It's not about Windows, and it's not about ASP.NET," he said. "It's about making customers and developers successful at building next-generation experiences." ▮

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REPORTING ON LGX MART

Source: LogiXML

LogiXML Introduces Data Mart for Reporting

BY DAVID RUBINSTEIN

Taking the same approach to reporting that organizations use for data management, LogiXML introduced LGX Mart, a data mart that works with the company's ad hoc reporting tools.

LGX Mart, released on Sept. 30, sits between an operational database and a reporting engine, and extracts data from different sources to serve into reports, according to Arman Esraghi, the company's founder and CEO. "The ideal is to run reports against the operational database, but that doesn't scale," he said.

Historically, organizations create data warehouses and marts to optimize data for reporting and analysis, but this has meant high costs for software licensing and IT staff to set this up, Esraghi explained. "Our solution is an easy mart that isolates the database from security and loading issues."

> *'Our solution is an easy mart that isolates the database from security and loading issues.'*
>
> *—Arman Esraghi, founder and CEO, LogiXML*

LogiXML's main focus is Web-based interactive reporting and business intelligence, according to Esraghi, with products that address managed, ad hoc and OLAP reporting. "When we say report, we see Web page," he said. "Others try to model a sheet of paper. AJAX is a miracle for us, but for some competitors it's a headache. They are rigid with paper formatting."

Esraghi noted LogiXML's reporting tools support PDF and Excel-based reporting. "Not all reports lend themselves to the Web," he said.

With Web-based AJAX reporting, users don't have to retrieve data for 10,000 items when they only want to look at one or two items, he said. "People don't want their reports precompiled," Esraghi said. Reports are based on users' needs, he added.

THREE UPDATES

Also last month, LogiXML released new versions of its three managed reporting tools—LGX Report, Report Plus and Info.

Esraghi described managed reporting tools as those used by developers to create reports for an end user.

New to the products are Gantt charts, and for LGX Info only, animated Flash charts. The Flash charts, combined with the recent AJAX enhancements, make for dynamic reports, Esraghi noted. The Gantt charts give users a history of tasks or activities based on a preset time frame.

Esraghi is positioning his products as a unified, standard-based platform for reporting, with non-prohibitive pricing, a full feature set and ease of integration. For unlimited users, the Professional managed reporting tools costs US$4,995 per processor, while the ad hoc tools cost $9,995 per processor and the OLAP tools cost $5,000 per processor. There are free versions of the managed and OLAP tools, with fewer features.

LogiXML also has launched an open-source Web site (opensource.logixml.com) to begin building a community of users creating and sharing applications from LGX elements. LGX is the company's proprietary XML-based modeling language. "This allows people to build applications on our LGX platform like an open-source product," Esraghi said. The site will host a number of BI applications that people can download and customize as they need. The site is currently live. ■

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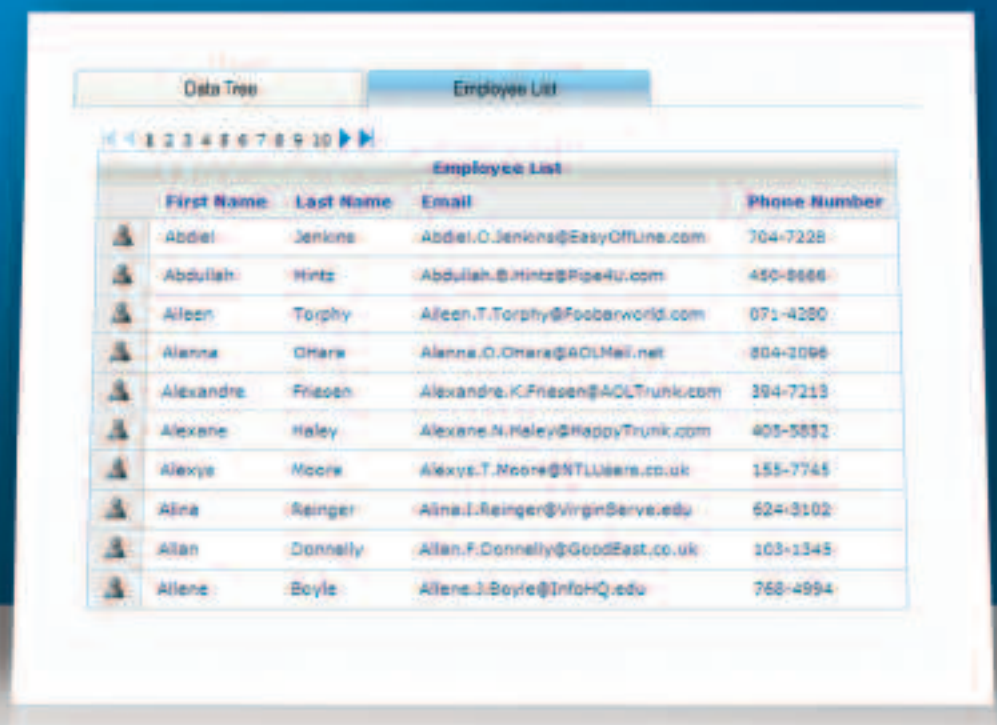

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WINDOWS FORMS ASP.NET WPF JSF

grids scheduling charting toolbars navigation menus listbars trees tabs explorer bars editors

PeakStream Is Extraordinarily Serious Runtime

◂ continued from page 1

multiple types of CPUs and GPUs so code can execute anywhere," he said. Initial VMs will support Cell, multicore 32- and 64-bit Xeon and ATI GPUs (now owned by AMD). "This is the magic of the technology; apps can run anywhere with no rewrite," Papakipos claimed, adding that the VM handles matrix math, core math, signal processing and user-developed intrinsics.

After reviewing a PeakStream white paper, Steven Wallach, a supercomputer designer and consultant to Los Alamos National Laboratory in New Mexico, said he believes the technology has potential. "For a certain limited set of applications, they could probably see significant increases," in performance, he said, provided they're 32-bit apps performing lots of floating-point operations. "GPUs are 32-bit, single-precision processors," he said.

There is a degree of work involved, but far less than would be without the VM, Papakipos said, and with greatly reduced risk. "The process of taking an array of data and [manually] assigning it to multiple cores is program-directed," he said, and by design creates the need to lock one processor while another finishes its work. "PeakStream is different. We steer clear of the issues that cause multicore programs to hang." Arrays are treated as first-class objects and are completely atomic, he explained. "Each operation is completed before the next one begins. The programmer is not assigning work to processors, so it's impossible to get those race and deadlock conditions."

ALL APPS MUST CHANGE

PeakStream introduces a technique it calls stream programming, in which program parallelism is expressed in arrays. "Arrays match the character of high-performance computing because [HPC apps] tend to be data-intensive and have many mathematical operations," said Papakipos. The runtime handles work scheduling and read/write operations with non-uniform graphics and system memory. Latencies associated with movement of data from system to graphics memory are improved by a shared cache.

"We've also included the ability to do explicit reads and writes to graphics memory" or to main memory, said Michael Mullany, PeakStream's vice president of marketing. "That's an advantage because it gives the programmer more control of what is being moved to memory and when," he said, adding that specific computations can be earmarked for processing where they will be handled most quickly and efficiently. "We recommend that arrays [contain] at least 10,000 elements for optimal performance," he added. Unmodified applications will run, but will not be accelerated.

Based on technology developed at Stanford, stream and array-oriented languages have been in use in HPC and academia for decades. "But we're the first commercial stream programming platform, and the model we are introducing is for doing high-performance computing." ▮

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Mono Hasn't Caught On in Corporate World

◂ continued from page 1

the 2006 .NET Development Study, conducted by BZ Research in September, only 3.6 percent of enterprise development managers said they were currently using Mono, and 4.8 percent said they were targeting it for new or migrated applications.

Those numbers are borne out by Michael Goulde's experiences in speaking to enterprise developers as well. Goulde is an analyst at Forrester Research, and he's not convinced that there's much call for Mono in the enterprise thus far.

Goulde said that the server-side code of Mono is still not ready for prime time. "I think a lot of their energy has gone into the client side, so the potential for how many people out there who it would be relevant to starts to get really small. You're looking at people who have both Windows and Linux on their desktops, who have stand-alone applications. Whereas if you're asking questions about Java and Java frameworks, those are largely being used on the server," said Goulde.

Another reason for the lack of uptake, said Hargett, is a dearth of automated unit tests in Mono. He said that in his experience, new versions of Mono often break former compatibilities, and even reintroduce long-dead bugs. "On their C# compiler and on the Mono runtime itself, they do a really good job of [testing]," said Hargett, who has since left his former employer and is now an Extreme Programming consultant at Pivotal Computer Systems.

"But as far as other pieces, like the ASP.NET compiler and the Windows Forms stuff, unfortunately, while it's always getting better, it's not always moving forward," added Hargett. "They'll fix a bug and it will [later] become unfixed. Until they fix these things, I wouldn't recommend anyone use Mono for deploying Windows Forms or ASP.NET applications."

But Miguel de Icaza, the lead developer on the Mono project, said that he feels the server side of Mono is well covered by tests. While Mono doesn't have a QA team, said de Icaza, it does have an active community that puts fresh builds to the test every night, then reports bugs that are dutifully fixed.

de Icaza admitted, though, that Mono has trouble testing Windows Forms, the Windows GUI framework. "GUI components are a lot trickier because you need to look at the screen to see if it's properly displayed. There is some hope we can integrate some of Mainsoft's test cases into Mono. They use image comparison algorithms [to test GUIs]," he said. The Mono project has received donations of test code from Mainsoft before, and de Icaza hopes the company's new image comparison tests will help make Windows Forms run more smoothly.

"You can't build your business around an application stack unless you have confidence in it. When people ask me if I'd use Mono again in a commercial application, I'd say yes, but only if I had a specific contract with Novell that said they'd have an automated test for [each] bug I reported," said Hargett.

"It has a great deal to do with the fact that unit testing isn't as important to them as adding functionality," added Hargett. "There hasn't been a strong business incentive for them to change that. It's the same as any other product, commercial or otherwise, from that perspective."

But de Icaza insisted that Mono is covered where it counts. "Although we don't have a QA team, we do have more test cases for the virtual machine and test classes and libraries than any other open-source project I've seen, such as any of the Java efforts or Ruby things," he said. He added that Mono has come a long way thus far, and that current trouble spots, such as support for Windows Forms, will likely vanish once Microsoft releases Windows Vista and casts aside the stop-gap solutions. The Windows Presentation Foundation, Microsoft's user interface for Windows Vista, should be easier to support, claimed de Icaza.

As for the current server-side enterprise APIs, such as Microsoft's Enterprise Services APIs, de Icaza said that the Mono team won't be adding support anytime soon. "We don't have plans to implement enterprise services because we're just going to jump to Indigo," said de Icaza. "This whole enterprise services pack was really a wrapper for COM+, which was a set of APIs to implement enterprise features to come."

REDMOND PASSES

While Novell has thrown its weight behind Mono, Goulde feels that there is one company that could help Mono mature into a viable enterprise tool, though he doubts that Microsoft would ever get involved in the Mono project.

"Microsoft doesn't understand the opportunity that Mono presents for putting forth a viable competitor to Java for a cross-platform development framework," said Goulde. "If Microsoft opened its eyes and did everything it could do to help Mono along, the ultimate beneficiary would be Microsoft. But they're not interested in helping to put the .NET Framework on Linux. They think that will make Linux more attractive. They just fall short of understanding that Java is just as much of a threat to .NET today as it was five years ago."

But the chances of Microsoft joining the Mono project are slim to none, said Goulde. Both Hargett and de Icaza agreed that the Redmond giant isn't likely to come to the Mono table anytime soon.

Microsoft in a statement said, "Although the work that Miguel de Icaza is doing with ECMA-standard managed code is great, Mono as a whole is not a project that Microsoft currently supports." ▮

BLEATINGS FROM THE BLOGOSPHERE

Thanks to the wonders of the Internet, developers around the world can sound off on what they're doing with Mono. One such developer, an enigmatic fellow who blogs at imroot.com, writes:

"I have gotten a nice little program going that I call S3Explorer that allows me to put files up and down with Amazon S3. But since I am a dual Mac/PC user, it has really been nagging at me that I would like the program to run on either platform. So I downloaded Mono and began playing with it. I have to say, it is amazing, not flawless, but very good. So good it made me wonder why is it that an outside group can put something together that runs like this but Microsoft hasn't released a .NET VM for anything other than Windows?"

Another developer wrote, on the Mono mailing list, "For me I could go for just a plug-in to Firefox (Linux and Win32), wouldn't even need it to support IE. Until this can occur, a programmer still has to have Java or an Active X plug-in to achieve Web page integration. Unfortunately not having this is a huge barrier to some people adopting Mono. Providing this (as even MS .NET doesn't seem to provide Web page plug-in ability of .NET) would put Mono over the top, and likely bring many more contributors on board making Mono grow much faster."

'When people ask me if I'd use Mono again in a commercial application, I'd say yes, but only if I had a specific contract with Novell that said they'd have an automated test for [each] bug I reported.'

–Matt Hargett, Extreme Programming consultant, Pivotal Computer Systems

News Briefs

MORE UPGRADES

◂ continued from page 4

released **NXTwareESB 2.5**. The new tool enables developers to expose existing COBOL, C/C++ and Java application logic on a SOAP-based enterprise service bus. The tool works with eCube's NXTware Evolution Server, which permits applications built on IMS, CICS, VMS DCE and RCP/TCP platforms to integrate with SOA applications built with Java, .NET and XML . . . JVM clustering solutions developer Terracotta has released a plug-in for **Terracotta DSO**, which allows the runtime solution for creating distributed shared objects to be accessed from within Eclipse. According to Terracotta, DSO permits data to be shared across multiple JVMs without the need for proprietary APIs, custom code, databases or message queues. Developers simply mention the object names at runtime to enable clustering. Developers handle the declaration process by navigating a graphical representation of objects and classes, rather than manually parsing an XML file.

PEOPLE

Data scripting technology provider EnableSoft has named **Scott L'Heureux** president and COO. L'Heureux was most recently president and CEO of Surgical Information Systems . . . Sun Microsystems has hired **Thomas Enebo** and **Charles Nutter**, the creators of JRuby. The pair created and maintained JRuby, a project to bring Ruby into the Java Virtual Machine. At Sun, they will continue work on JRuby as it advances toward version 1.0 . . . HP chairman **Patricia Dunn** will step down from her position on Jan. 18, 2007. Current CEO **Mark Hurd** will take over the position while retaining his post as CEO. Dunn will remain on the board of directors but will no longer be chairman. The move comes after an investigation that involved the controversial acquisition of private phone records by Dunn.

STANDARDS

The Organization for the Advancement of Structured Information Standards (OASIS) has launched opendocument.XML.org, a resource and community Web site for people working with the standard **OpenDocument Format**. ▮

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ESC Boston Is Site of Teardowns and Disruption

New programs are intended to spice up life at an old conference

BY EDWARD J. CORREIA

Attendees of the Embedded Systems Conference in Boston's Hynes Convention Center Sept. 25-28 were treated to a Disruption Zone and Live Teardowns, new programs intended to bring a fresh atmosphere to one of the embedded industry's oldest trade shows.

"We're excited to introduce new programming into this year's conference to enhance the event," said Jim Turey, ESC program chair. Making its debut at ESC was the Disruption Zone, a vehicle for highlighting young embedded companies demonstrating groundbreaking technologies. One such company was showing a rechargeable fuel cell battery. Another was demonstrating a state machine as a possible RTOS replacement.

Live Teardowns feature the dismantling of selected products to demonstrate how they work. People attending the demonstrations vie for a chance to win the items, which included a Sony DVDirect multifunction recorder and a Roomba robotic vacuum.

SD Times SHOW REPORT

Green Hills Software announced an October release date for Multi 5, the latest version of its IDE for Linux and Windows. Central to the release is an upgraded TimeMachine debugging suite, featuring persistent debugging that constantly remains running in the background; a PathAnalyzer for visualizing complex system execution and simplified understanding and navigation; the ability to graph the values of variables over time; and an API for adding custom data analysis scenarios.

Other new TimeMachine capabilities will include a static code analysis tool, a distributed build system, a rapid prototyping tool, a new project manager, improved visibility and management of hardware resources and a flash programming framework. Green Hills announced that its SuperTrace Probe and TimeMachine now support Freescale Semiconductor's ColdFire microprocessors. Pricing was not disclosed.

Debugging tools maker **Macraigor Systems** introduced usb2Sprite, giving developers of systems based on ColdFire and DSP 56300 microprocessors the ability to connect to the on-chip debugging features of those Freescale chip families via USB 2.0 interface.

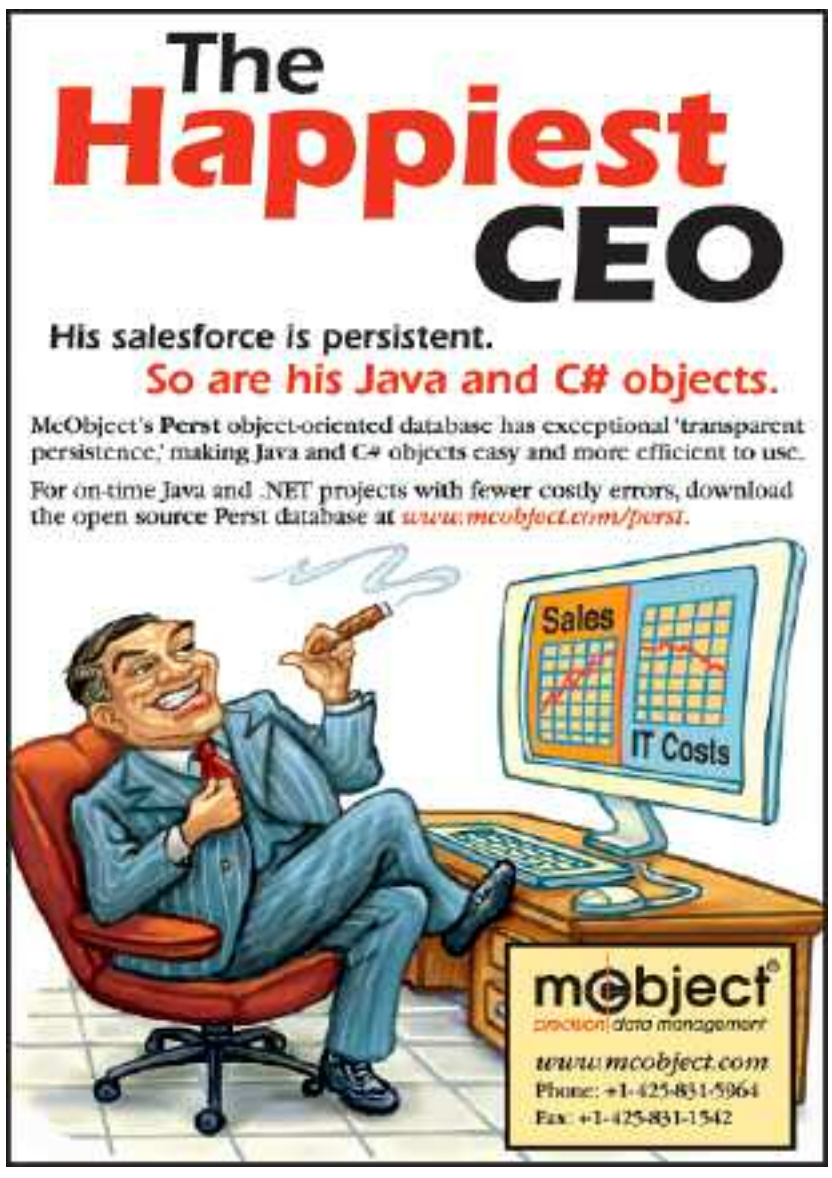
The US$225 device—for Linux and Windows—works with the company's OCDemon and its other debugging software. Macraigor also has added support for the ColdFire and DSP 56300 to its free GNU tools and includes gdbinit, source and make files and other sample configurations for most of Freescale's evaluation boards using those circuits for use with gdb.

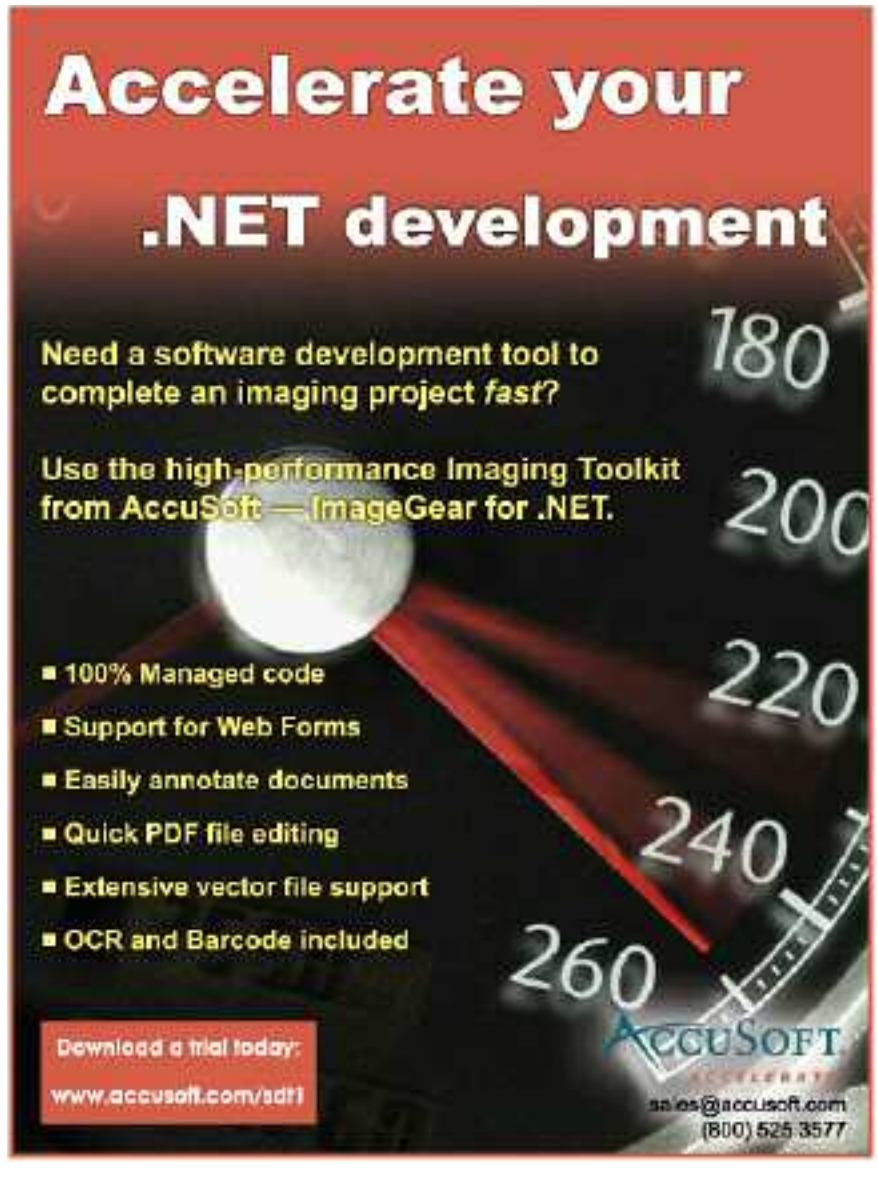
Mentor Graphics released a rewritten version of its Nucleus Plus, claiming the RTOS is now faster, smaller and easier to use. According to the company, more than 80 percent of the Nucleus Plus assembly codebase has been replaced with ASNI C, and is more organized to help simplify the job of migrating from one platform to another or from a development board to production hardware. The change also reduced the kernel size by an unspecified amount. Pricing begins at US$14,000.

Middleware developer **Real-Time Innovations** unveiled the RTI Developer Platform, a set of four tools for designing, analyzing, debugging and deploying distributed real-time application for use in mission-critical systems.

The RTI suite consists of RTI Designer, for system-level creation and organization of RTI's Data Distribution Service (DDS) objects; RTI Developer, for gaining system views of DDS metadata for debugging running systems; RTI Protocol Analyzer, which delivers network traffic views and helps with bandwidth utilization; and RTI Scope, a second debugging tool that provides real-time graphical views of DDS user data and monitors variables. It runs on Linux, Solaris and Windows, and pricing starts at US$4,995.

The company also updated DDS to version 4.1, claiming to give developers more control over message quality-of-service, leading to improved application-specific optimization of throughput, network bandwidth and processor utilization. DDS 4.1 also can now perform asynchronous publishing, allowing further optimization by aggregating multiple small messages into a single larger one; and content filtering, which can reduce message traffic based on relevancy of the content. DDS runs on Integrity, Linux, LynxOS, Solaris, VxWorks, Windows and Windows CE. Pricing starts at $84,600. ■





Major Advances in Motodev Online Services

Helping Motorola's developer ecosystem with code, carrier certification, hardware discounts

BY EDWARD J. CORREIA

Why develop for one cell phone over another? One motivation might be a wealth of developer tools and services. Giving a huge boost to the latter last month was Motorola, which on Sept. 11 posted a multitude of new services on its Motodev developer Web site to help developers with application testing and QA, carrier certification, integrating with localization services and finding discounted hardware.

"The difference between platforms is made up by the software," asserted Christy Wyatt, Motorola's vice president of ecosystem and market development. Aside from the operating system and a few basic utilities, most of what differentiates the company's Q, ROKR and other smartphones, she said, is the applications. "And a lot of that doesn't come from Motorola. So we're investing heavily in the developer ecosystem."

The services, which are the result of a slew of new partnerships, include application testing from NSTL and ReIQ, coding from Vanteon, audio from Sound Resources, GPS-based location services from Navteq and Tele Atlas, and other localization services from Alpha CRC and Medialocate. Pricing varies by service and application, she said. Motodev members, which Wyatt said currently count in the hundreds of thousands, also gain access to Motorola test hardware, discounted hardware from Dell and venture capital from Motorola's Motventures VC division.

First launched in May as a consolidation of its disparate development sites, Motodev (developer.motorola.com) offers free access to IDEs, graphics tools, application loaders and other tools, documentation, sample code, white papers and other resources for mobile, enterprise and home developers. Soon after, the company launched a repository for its open-source code and joined the Eclipse Foundation to champion the Tools for Mobile Linux project, aimed at simplifying C/C++ development for mobile devices.

The succession of activities, Wyatt said, is in part intended to help the corporate developer help management understand the value of mobilizing enterprise applications. "Why take an Oracle or Seibel application and build a mobile component? The business case is to explain the numbers and dynamics," she said, "so that developers can say, 'Here's the mobile wireless opportunity and why we need to be investing.' This is the first step." ■

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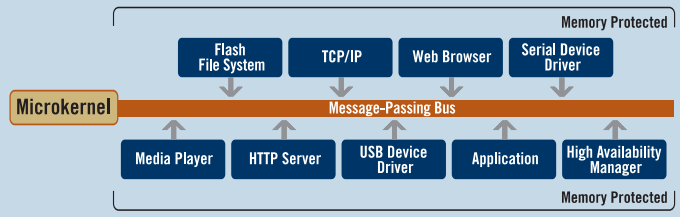

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The Sharpest Tools

Agile developers find index cards, sticky notes can be as valuable as expensive tool suites in maintaining flexibility

in the Shed

BY ALEXANDRA WEBER MORALES

Google the words "agile tools" and you'll scroll through nary a non-IT-related hit. From open-source options to start-ups and consultancies to longstanding ISVs rebranding themselves as agile, the software tool market has assiduously noted the power of agility in the eyes of its consumers.

But here's a test: Which company outside the software industry has enjoyed increased demand due to agility, without even trying?

If you guessed 3M, you're right. The maker of sticky notes—interestingly, the company agile consultant Mary Poppendieck modeled her vision of lean software development on—provides many of the paper-based tools agile developers rely on most. Now 3M has come out with sticky, sortable index cards that just may be the next big thing in agility.

A few brains, some cards and a whiteboard—is that really all agile teams need to get by? Conversely, are IT shops in safety-critical or audited industries slowed by their dependence on requirements traceability? Just as agility implies evolutionary product development, agile tool use, it appears, evolves from simple adaptations to complex systems.

U.S. LEADS 'LEAN' EFFORT

There's no small irony in the fact that a movement that began with an emphasis on using IT to improve responsiveness to swiftly changing manufacturing demands should be associated with certain Luddite tendencies among software developers. In the early 1990s, U.S. government efforts to improve on-demand military provisioning and global industrial competitiveness pushed a wide array of companies into creating open standards for manufacturing, allowing parts designed in one locale to be created elsewhere rapidly and efficiently. By the time, nearly a decade later, the concept of lean or just-in-time manufacturing had catalyzed the software industry by way of the Agile Manifesto of 2001, the emphasis had moved toward highly social approaches to developing applications.

Indeed, the first Agile Manifesto value, "Individuals and interactions over processes and tools," rallied developers to throw off the shackles of prescriptive and expensive application development tools. Many of the practices described by Kent Beck in "Extreme Programming Explained" were aimed at eliminating defects by writing tests before code—the opposite of the rampant "code and fix" mentality lamented by Steve McConnell in "After the Gold Rush: Creating a True Profession of Software Engineering." And at such sites as Symantec's American Fork, Utah, campus, Extreme Programming adherents boasted about the fact that they no longer needed debuggers or fancy IDEs.

Over the same period, open-source software became an increasingly important member of the high-tech ecosystem, changing programmers' views of what should be community property and what should be commercial. As a result, most of the development tool set has become freely available, with a constant influx of new widgets as agile practices become more popular.

PROCESS OVER TOOLS

At first blush, agile teams tend to focus on the paradigm shift rather than the tool set—as well they should.

"I think that tools are of little importance in terms of having a successful implementation of an agile process," said Jon Kurz, an application architect with Lincoln Financial Group in Arlington Heights, Ill. "The focus should be on the process itself. For example, regardless of the size of the team or the technologies used, it is important to have a solid source code management process. Being able to build and deploy in a robust, repeatable and managed way is also extremely important to the success of projects, but often overlooked. The build process itself could use Automated Build Studio [from AutomatedQA], BuildIt [from Microsoft] and FinalBuilder [from VSoft Technologies] or something homegrown, but this is necessary to allow the team and customers to have a high degree of confidence in every release of the product."

According to Scott Ambler, prolific author and practice leader for agile development with IBM Rational's Methods Group, "Agility and tools are pretty orthogonal. I can use most development tools in an agile manner as well as a very nonagile manner. For example, although agile developers use JUnit to take a test-first approach to programming where you write a single test and then just enough production code to fulfill that test, what's stopping you from writing 10,000 tests up front before writing a single line of production code? Absolutely nothing, other than perhaps sanity. Similarly, even though data modeling tools seem to be commonly used for traditional, big design-up-front efforts, I've worked on agile projects where I used them to evolve the database schema throughout the development project. It's typically a matter of choice, once you understand that you actually have a choice."

Ambler's March 2006 Agile Adoption Rate Survey (www.ambysoft.com/surveys) of 4,232 developers found that, of the 41 percent who had adopted agile methods, Extreme Programming (XP) and Scrum were the most popular by far. While the latter has more of a project management focus, XP is packed with engineering and scope-defining practices, many of which are tracked on paper. Such "information radiators" as posters and cards are critical components, according to Matt Gelbwaks, former chief agilist for Borland Software ("We invented that title at Borland," he said) and now chief agilist at VA Software, maker of SourceForge.

"The best way to teach anyone to do agile is to use 5x8 colored index cards, very graphically and physically, in a small room. The approach that I took at Borland was, you get people into a room and you level-set. Then you go through the planning game or doing a couple of iterations with cards. Once people begin to develop that muscle memory, then you look at the tools and ask, 'What can we do with what you have?' In some cases, you find you just can't use them. Then, I usually end up picking the short straw and going to the CTO and saying we need something different. The tools are what make the team efficient," said Gelbwaks, who boasted that his "very checkered past includes dabbling in every single methodology that has been invented." But are some tools—say, for requirements management or modeling—inherently anti-agile?

'I think that tools are of little importance in terms of having a successful implementation of an agile process. The focus should be on the process itself.'

—Jon Kurz, application architect, Lincoln Financial Group

NO TOOL TOO BIG OR SMALL?

"All version control systems are not created equal. Some, such as [open-source] Subversion or CVS, are much more in line with continuous integration and constant check-in. Ones like [IBM Rational's] ClearCase, however, are at the opposite extreme—the opposite of agile. They want to predict everything up front," said Glenn Bernsohn, formerly a senior project manager and agile coach at ThoughtWorks in Chicago. "My experience has been that the smaller the team, the less tooling you need. The larger the team, the more you need."

Gelbwaks, on the other hand, is much more willing to give the tool the benefit of the doubt. At Borland, he worked with the company's own suite of software development life-cycle tools—"And the suite was never designed to do anything agilely"—while Borland undertook Scrum across its entire 400-person R&D organization.

An article by Gelbwaks in the July 2006 Cutter IT Journal, "Feature This: Transforming Borland's Development Process With Scrum," describes Borland's use of its own Caliber RM requirements management tool in an agile context—a concept that seems counterintuitive to those agilists who prefer to discover requirements iteratively rather than define them all initially. Project management is simply the management of the life cycle of requirements, according to Gelbwaks, and requirements need not be perma-

▸ continued on page 40

Alexandra Weber Morales is the former editor-in-chief of Software Development magazine.

The Sharpest Tools for Agile Range

◂ continued from page 39

nently chiseled in bits. Surprisingly, the first agile group at Borland was the Caliber development team, with three-quarters of its members based in Russia and the remainder in Atlanta. British Telecom, in another example, adopted Borland's collaboration tool StarTeam because it was already in its arsenal—but in an agile maneuver, British Telecom's developers used an API to pull out data to generate burn-down charts and other agile metrics.

In a similar fashion, in his new role at VA Software, Gelbwaks is focusing on the fact that SourceForge manages the requirements and the components of the requirements—understandably, given its open-source origins. "In the open-source world, you take your stuff down, work on it and put it back up. It's a hugely distributed agile environment. Now, it's hard to pair program with yourself, but lots of open-source stuff has one or two people working on something simultaneously. You're not only distributed in space, but in time."

Tool use does change in agile teams, IBM Rational's Ambler concurred, "particularly from the point of view of a traditionalist. Many traditional development tools reflect the mindset that specialists hand off work to one another in a nearly serial manner, whereas agile tools reflect the mindset that developers are 'generalizing specialists' working in an iterative manner. For example, there are a lot of really great traditional data modeling tools out there, which are based on the idea that a data modeler will create a comprehensive model from which to generate a database schema for the development team. This sort of tool works well in a traditional environment but proves to be ineffective in an agile environment." Instead, Ambler said he sees agile developers using an IDE such as Eclipse or Microsoft's Visual Studio, both of which provide modeling, testing and programming functionality in one tool.

"These tools are incredibly effective for generalizing specialists, people with one or more specialties plus a general knowledge of software development, who pair together to implement high-quality, working software in an evolutionary manner. They'll use these tools to do just enough agile modeling, just enough test-first programming, and just enough production coding to implement the current requirement that they're working on. It can be the difference [between] night and day," Ambler said.

THE METRICS THAT MATTER MOST

In his recent work as a consultant employing SourceForge Enterprise Edition with IT shops that were agile tyros, Bernsohn found the tool to be methodology-agnostic. In order to configure SourceForge to support agile teams, he linked stories (units of work, or use cases) to their related automated tests, and also created tracker objects that mapped to stories and prompted stakeholders for necessary update information.

"There are two parts to a story: the story itself and the metadata, such as the estimate, who created it, when it's due, and so on. The document repository was useful for storing the stories. The other thing I did was to create an agile template using the wiki that's built in to SourceForge." The only missing piece, according to Bernsohn, is reporting. To solve that problem, they built a plug-in that downloads the metadata from SourceForge to an Excel spreadsheet.

It's important to keep quite a few metrics about the progress of agile teams, Bernsohn advised, to counter the many myths about agility: "People usually pick the easiest part of it, like iterations and standups. People tend to ignore the engineering practices, like test first, continuous integration and pair programming." Tracking code coverage, velocity and unit tests provides concrete insight into the team's progress—or lack thereof. If, for example, unit test numbers are not trending up from one iteration to the next, that means either the team isn't writing new code or new tests—or that the code isn't easily testable.

The other metric Bernsohn likes is more complicated, he warned, but is important if one of the goals of lean programming is to eliminate wasted effort. That statistic looks at the lifespan of a story. "When does a business analyst start writing a story, when do the developers look at it, when does QA test it, when does the customer try it? Is it a week, is it six iterations later, is there a backlog? We want to do things just in time. If the stories are getting written too early, that's a problem. We want to know how long things are in cycle. You won't see that in the basic XP books."

From Sticky Notes to IDEs

As agility has matured, the focus on useful metrics has grown. Bernsohn has observed that, as teams mature, they too begin to gather more comprehensive information about their progress—and that's a move that sounds suspiciously like it's stolen from Carnegie Mellon University's Capability Maturity Model. Be that as it may, spreadsheets, cards and wikis can all help track and motivate collocated team members at a glance. On the other hand, "if you have a team that's distributed, the wiki helps a lot, but the spreadsheet starts to break down because it's a one-person tool. But every single team I was on, distributed or not, still had a story card wall, somewhere, because the developers want to see what's happening in this iteration."

THE 30,000 FOOT VIEW

Some argue that you can tell how successful an organization will be in adopting agile methods by the tools it already owns: A company replete with licenses for a Borland or IBM Rational suite will be staid and slow-moving, so the conventional thinking goes, while one that embraces SourceForge or the open-source XPlanner will be toying with agile concepts from the get-go.

Regardless of the development team's predisposition, according to chief agilist Gelbwaks, "in any organization you need someone responsible at the highest level for the methodology, because how you do things has a direct effect on what it's going to cost. Also, when an organization decides to move to a new paradigm, it's very scary—people don't want to endanger themselves or force themselves to learn something new."

While agility to date has focused on practices primarily designed to improve the quality and responsiveness of software development, there has been little effort to extend that concept upward in the IT world. This is where a new class of tool, portfolio managers, can be extremely valuable, said Gelbwaks.

"I've been trying to get people to look at portfolio management tools at the agile level. There are all these articles asking what is the earned value of your agile projects. You should look at your projects as being akin to a release. Get your CIO looking at it the same way a product manager would," he said. Rather than viewing software projects as sunk costs, portfolio management tools can help ascertain what's delivering the most value to the business as a whole.

If a company is faced with the choice of augmenting its call center's functionality or adding competitive features to release 2, such a tool can help evaluate how much money either scenario will generate. "We're very adept at doing that at the project level, but we don't do that at the portfolio level. In my experience, both of the budgets are cut so they can do half of each," said Gelbwaks. ■

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EDITORIALS

What Linux Needs

Why is Microsoft's Windows so successful on the desktop, and why is Linux such a distant also-ran? There are many reasons, but one of them certainly must be Microsoft's longtime devotion to software developers—both enterprise coders and those who work for partners and other software companies.

Many years ago, an evangelist at Sun gave his company's nascent developer portal what, to him, seemed to be glowing praise: "It's almost as good as Microsoft's." If you want to write software for Windows, whether it's based on .NET or Win32, or is for Windows XP or Windows Vista, Microsoft makes it super easy. It sponsors books and coding challenges. It has an excellent Web portal in msdn.microsoft.com. It produces top-quality events like Tech-Ed, the Professional Developers Conference and WinHEC. In its MSDN Universal subscriptions, it provides developers with tools for a bargain price, including runtimes of just about every enterprise and consumer platform. It preaches and teaches around the world. And developers have flocked to its banner.

What about Linux? There are lots of tools, such as the GNU toolchain from the Free Software Foundation, Eclipse and some others. But nobody has made supporting Linux developers a priority. LinuxWorld? It's not for developers. JavaOne? It's platform-agnostic, focusing on Java, not on Linux, although many Java EE applications are deployed on Linux servers. Red Hat? Ubuntu? Novell? IBM? Nobody focuses on evangelizing to developers, teaching developers, embracing developers, loving developers.

They leave that job for Microsoft. And so Microsoft gets the developers, and the developers develop for Windows.

There are few tangible barriers to deploying Linux onto enterprise desktops. Horizontal business applications, such as Office suites, e-mail clients and standards-based Web browsers, are there. The cost is attractive. The user interface is friendly, and the need to recompile the kernel is minimal. Support is easy (assuming you can find knowledgeable technicians and administrators—it's not been a compelling career path).

For Linux to expand its reach onto the enterprise desktop, key stakeholders, from the Open Source Development Labs to the major distributors to historical supporters like IBM and Oracle, have to reach out to the Linux software developer. That means building an infrastructure, and a long-term commitment, to making the developers their new best friend.

Without developers, there's no market, and Linux will remain a niche operating system.

What HP Doesn't Need

The developing scandal at Hewlett-Packard has been covered in great detail in most general-interest newspapers. You've doubtlessly read or heard about how Patricia Dunn, chairman of HP's board of directors, hired investigators to find out who leaked confidential information to reporters. It turned out that the leaker was one of the directors, but one method used by HP's investigators, called pretexting, included falsifying their identity when talking to the phone company, and thus illegally obtaining telephone records.

In the wake of this scandal, currently under criminal investigation, Dunn said that she would resign her chair in January 2007, to be succeeded by HP CEO Mark Hurd. Frankly, she should leave now.

Despite HP's remarkable market-share and financial turnaround this year, it's been less than two years since the firm was floundering under the leadership of former chairperson and CEO Carly Fiorina, herself ousted in February 2005. Meanwhile, HP, in the process of buying Mercury Interactive, is poised to become a major player in the software testing and performance management market—the 600-pound gorilla for test/QA tools and services.

The instability at HP makes us nervous. Is this a company that we can trust as a core platform provider—or a dramatic soap opera waiting for the next boardroom revelation? Stay tuned for the next thrilling episode of "As The Board Turns." ▮

A Date With AJAX

On an intellectual level, the appeal of AJAX is compelling: Web-based applications act like local executables, with interactive user interfaces freed up from HTML's postbacks. We've been covering the rise of AJAX here at SD Times mainly from the viewpoint of development tools and runtime platforms. Other than the occasional demo, however, I haven't spent much time hands-on with AJAX.

Zeichick's Take

That's changed, thanks to Google Calendar, which is an exemplary demonstration of Asynchronous JavaScript and XML. But first, the back story.

For a couple of years now, my family has been using shared calendars to keep track of our myriad business, school and personal obligations—it's a lot better than the old paper calendar hanging in the kitchen!

We've tried many different systems, and eventually settled on Yahoo Calendar. We liked its features: Because it's Web-based, you can access it from everywhere. My wife and I were able to "share" each other's calendars, and ultimately set up a family group calendar to reduce the number of duplicated events, like vacations or travel. Functionally, the system worked fine, though odd bugs regarding repeating events drove us nuts.

However, Yahoo Calendar had usability limitations, mainly that it worked and acted like a Web application. You couldn't just type into a calendar cell; you had to use a "add event" button. Performance was often slow. You couldn't move an activity from one date to another, or adjust its start time or duration, by drag and drop. And so on.

Yahoo Calendar, despite these limitations, did what we needed, and we were all happy with it—until we decided to play with the beta of Google Calendar one evening. After 15 minutes, we were hooked. An hour later, we had migrated our data from Yahoo to Google (by exporting/importing Microsoft Outlook files, in case you're wondering), and haven't looked back.

While Google Calendar looks much nicer than Yahoo Calendar, that's not the big benefit. Rather, it's the AJAX. You can type an appointment into a box. You can drag and drop, and an event moves. You can view multiple calendars as overlays—and the screen changes instantly, without postbacks, on both my wife's Windows XP machine and my Mac. While you'd never mistake the AJAX-enhanced Google Calendar for a native application, it comes pretty darned close…and it runs through a browser, without having to download/install any plug-ins.

That doesn't mean that Google Calendar is perfect. There's no global search-and-replace, for example. You can't custom-color events, or change fonts. Unlike Yahoo Calendar, you can't categorize events by searchable type (such as a club event or TV show). Unlike desktop shared calendar systems, it won't help you search for a free time to have a meeting, or warn you when two events overlap in time. And when they do overlap, it's hard to read the text. Still, it's a big step forward.

If you're wondering about AJAX, compare Yahoo Calendar to Google Calendar to your own personal or corporate desktop calendar app, such as iCal or Outlook or Palm Desktop. That's about as good a demo as you're going to get from any software development tools company. ▮

Alan Zeichick is editorial director of SD Times.

Letters to the Editor

VIRTUALLY TROUBLING

In regard to your article ["Xen and the Art of Virtualization," Aug. 15, page 1], what's interesting is that VMware treats all OSes as equals. I can imagine that some software development organizations see this as a threat. I can also imagine that I will sometime hear about Linux virtualized on top of Windows Server with the comment that Windows Server is where all the "heavy lifting" is done. Microsoft's deal with Xen is troubling.

Doug Hart

LICENSING ISSUES

Editor's Note: In the Sept. 12 Test & QA Report newsletter, "Tester Certification: The Readers Speak," Scott Barber of test consultancy PerfTestPlus wrote: "Teachers, surgeons and engineers are certified by federally recognized organizations.... There are no federally recognized licensors for software testing. Software testers are not required by any governing body to be certified in order to practice."

Jim Amos of Maverick Systems replies: I think you'll find that the first requirements for licensing of professions were by the individual states (in their role to protect the safety of citizens), not the federal government. Now, it is true that the feds have piggy-backed onto state licensing and even taken over some parts of it, such as the authority of MDs to prescribe controlled substances. Whether a mechanical engineer (or a software engineer or a software tester) is required to be licensed is usually a state matter, not a federal requirement. ▮

The Good, the Bad and the BS

Windows & .NET Watch

The software profession has failed, in both the small and the large, to make visible the quality of our work. Programs are judged by the aesthetics of their interface or the immediate utility of their functions. For end users, these are rightly the first and last concerns (with perhaps a small reserve for some awareness of reliability). The problem is that there are times when we, either as individuals or as businesses, need to convince others that one choice in programming (us) is better than another choice (them). As an industry, we have failed to develop a unified message to help those outside our circle discriminate between good and bad.

Not only is there no objective measure that we can offer, but we don't even have any traction on subjective measures like safety or "feel." The end result is that decisions about hiring (individuals or subcontractors) are utterly dominated by only two issues: price and fear of failure. Amongst ourselves, we know that at the request-for-proposal stage, promises about cost and satisfaction are signifiers of incompetence, if not outright fraud, but at some point all of us will lose a job because a CEO heard "risk" from us and "certainty" from another. Saying "good riddance to such a clueless person" may console us once or twice, but the truth is that 40 years after the phrase "software engineering" was coined, we hardly have a clue to give.

I have a client that's facing a legitimate crisis: Serious shenanigans on the part of an existing software subcontractor have created a true threat to the business. I was engaged as a potential coder (the domain is one that Google steers my way), and I found myself in meetings whose purpose was to interview other potential subcontracting teams. It wasn't my place to lead the discussions, so I passively observed a smart CEO and MIS director trying to decide between, on the one hand, one of the most impressive initial architectural discussions I've ever witnessed and, on the other hand, bozos with sales skills. As with many companies, my clients didn't view themselves as a software development company, and the MIS director, while sharp and more than competent at handling infrastructure and integration, just wasn't experienced in developing strategic software. While his BS detector had the right trend, what appeared to me to be a black-and-white decision was, to him, still gray. Thankfully, they both asked for and took my advice. Life is too short to program with bozos, and while there are no guarantees, I feel pretty good about the odds.

Another story, on a different scale: Back in 2001, in the midst of the post-dot-com implosion, a programmer (let's call him "Gary") architected and helped code core components of a system for a start-up company. With the business climate grim and a long engagement, Gary charged a far-from-extravagant living wage. Recently, the company contacted Gary again and told of their success: hundreds of clients, tens of millions of dollars in transactions going through the 5-year-old architecture. Would Gary be interested in helping architect the system to take them "to the next level"? Of course! Not only were they good people offering a great challenge, but surely he could charge them a pretty penny.

For a private contractor like Gary, a "pretty penny" still falls dramatically short of the rates charged by major consulting firms for even a moderately experienced developer. Recently, the FBI announced that a US$170 million project given to SAIC in 2001 resulted in 730K lines of code. Putting aside the fact that the code didn't work, back-of-the-envelope calculations estimate 300-400 person-years of effort at around $200-$300 per hour. (This calculation accords with the report that as many as 200 programmers were kept on staff.) SAIC surely charged $400 per hour for architects and "just" $150 per hour for a Web designer, but that's just a kabuki dance: SAIC undoubtedly produced reams of documentation and gigabytes of PowerPoint slides, but ultimately, everything a contractor does during the development phase is in support of the code.

So when Gary said that he'd be thrilled to work with the company at twice the rate that they had paid him five years ago, he felt that he was being generous. For less than what the FBI paid for an assembly-line developer, the company would be working with the person who had helped architect their current system to a rare level of success. Are you surprised to hear that not only did the company balk, but that negotiations ended when Gary held firm to a 40 percent raise? To them, that the previous work had held up for half a decade and scaled from two to 800 clients reflected little glory on Gary. That's what's systems do, right?

The software development industry has held too long to insular debates about what constitutes an ideal quality metric and in jostling buzzwords up and down. Every company of any size is now in the business of software development, and management needs to be educated, not about our internal debates, but about truths that we know to be universal about software development: Different individuals and teams vary greatly, tools and processes matter, and the difference between a good architecture and a bad architecture is the difference between an evolvable system and a quagmire. ▮

Larry O'Brien is a technology consultant, analyst and writer. Read his blog at www.knowing.net.

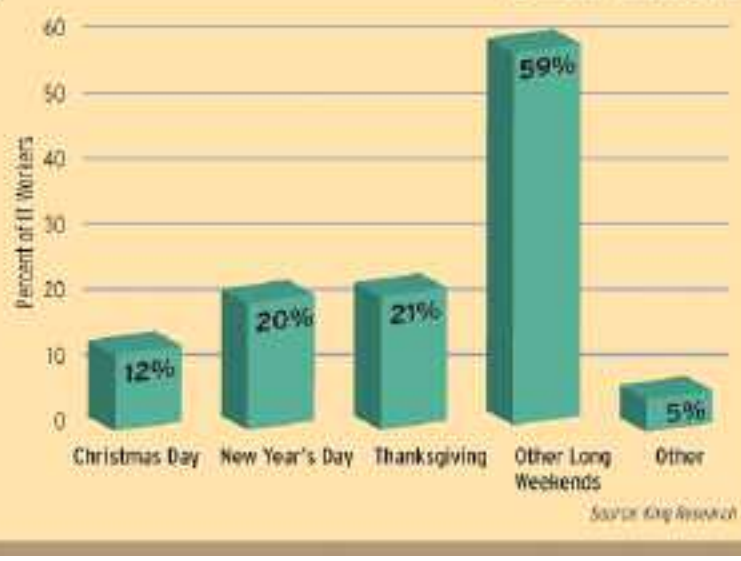
No Holiday for IT Workers

DATA WATCH

Are IT duties keeping you up at night or causing you to work weekends and holidays? According to King Research, you're not alone.

A survey published in July by the California-based technology researcher found that 80 percent of IT workers are forced to work on Thanksgiving and other traditionally long weekends (see chart). The same number said they are unable to perform routine, non-emergency maintenance tasks such as software upgrades and security assessments during business hours Monday through Friday.

The survey included responses from 249 IT professionals, managers and business owners responsible for 760,000 servers and desktop PCs, 95.5 percent of which were running Windows.



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That's One Gallopin' Mustang, Sun!

Unlike some of my more austere colleagues, I find what Sun is doing with the new releases of Java to be mostly good, and certainly exciting. Personally, I have felt this way since the Java 5 release. In my coding work these days, I use nearly all the features that release gave us. Generics, enums, annotations, varargs, printf(), the new for-loop—pretty much everything. I like the syntactic sugar and the convenience they bring, so I use them wherever I can.

We can all debate about whether these additions were too little, too late. However, as I have pointed out before, I really don't think it's too late for Java in the way Bruce Tate (of "Beyond Java" fame) and the legions of Ruby enthusiasts do. The changes might be too little, but Sun has a bunch of new stuff in store for Java 6, code-named Mustang, that's got me wondering whether I should switch over even before its final release (currently set for October). Mustang also has one peculiar addition, which I'll discuss shortly.

An improvement that will be of interest to many readers is the incorporation of a bunch of XML and Web services technology from Java EE, combined with some annotation magic. You now can define a function and, with the single @WebService annotation, convert it into a Web service. (And if you want to test it on the spot without uploading your classes to the corporate Web server, you can use the built-in, barebones HTTP server.) It's pretty much that simple: An annotation and a pair of import statements are also needed.

Integration Watch

Another feature, which will gladden the hearts of the scripting enthusiasts budding within us all, is the addition of a new bytecode, invokedynamic, that makes scripting engines embedded into Java much more efficient. The bytecode facilitates the execution of methods in the absence of type information. (Essentially, it permits the code to do non-Java things. While this addition is being done strictly to support embedding languages that use duck typing, one has to wonder whether this is not laying the groundwork for more scriptinglike Java syntax in the future.)

The geeky part of me is particularly fascinated by another capability, which enables me to compile code on the fly and hot-load the class while the application is running. This is cool stuff and has some practical uses. For example, suppose you have hard-coded business rules, and based on data you're processing, you recognize that an entirely different rule set is necessary. In such a case, it might be easier and faster to regenerate the code for the business logic, compile it and load it than it would be to write hugely complex decision tables that incorporate all the various possibilities.

Mustang also adds some convenience features. The most important, to my eye, is way overdue. It enables wildcards to be used when specifying the classpath. Now, you can put your jar files in a single directory, and specify that directory followed by an asterisk as your classpath, and the JVM will properly locate all the libraries it needs. Unfortunately, wildcards are only a feature of Java 6, not part of the specification, so implementations are free to not include support for them. At the syntactical level, there are small dabs of sweetness, one of which is the long overdue isEmpty() test for a string.

Mustang also adds and gets rid of baggage. The latter, which I believe is close to a first, was reported by Alex Handy in the Aug. 31 issue of SD Times' News on Thursday newsletter. In it, he discusses Sun's intention to drop little-used features, such as JDK support for MIDI files—a large blob of code that, apparently, was rarely used.

The JDK does add a peculiar item: a relational database. Sun decided that some kind of reference database for small desktop applications was in order—something akin to Microsoft's free Desktop Edition of SQL Server. So, it is bundling the Apache Derby database in the JDK. This DBMS is a polished product that was formerly IBM's Cloudscape (and previously, it was a product of Informix, which acquired it from its original designers). I have no problem with the product choice, but I think a database is a peculiar thing to include in a JDK (and not in the JRE), especially when there is no shortage of free, well-tested Java databases from which to choose.

Putting the database question aside, Java 6 is clearly continuing Java SE 5's march toward making Java friendlier and more usable. Java 7, which I will surely discuss in a future column, is pushing further along this path. I wish only that these new releases occurred more frequently than once every two years. ■

Andrew Binstock is the principal analyst at Pacific Data Works.

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All Dev, All the Time

In separate interviews for stories in this newspaper, the word "continuous" was brought into the conversations.

In one context, Maciej Zawadzki, president of build management software company Urbancode, referred to continuous integration—a marketing mantra also chanted by competitors BuildForge and Catalyst Systems, as well as the keepers of the CruiseControl project. The theory, which finds its roots in the agile methodologies, supposes that if members of a development project integrate their work frequently through the use of more frequent builds, the number of errors and integration problems will be reduced.

Industry Watch

When I shared this with John Michelsen, founder and chief architect of testing platform company iTKO, he responded that you can't have continuous integration with doing continuous testing.

You see, he said, as composite applications change, organizations need to do regression testing on existing functionality while testing any new components that are being added to the applications. Since changes occur rapidly to composite applications, the need to test more rapidly naturally follows.

Aside from the word continuous, though, these two messages have something else in common. Continuous integration and continuous testing require organizations to adopt new development practices.

Both Zawadzki and Michelsen are quick to note that their companies do not force process upon development shops. But both also said to get the max value out of these evolving build and test platforms, a move toward more agile processes is necessary.

These software providers see the world through a services lens. It's about business agility and continuity, they say. It's about being able to quickly take advantage of changes in the marketplace.

iTKO, Michelsen said, is working on defining the market for continuous testing. Urbancode, Zawadzki said, in effect started the build management market.

The strategies certainly seem to make sense to me. If you're building composite applications that require the swapping out of services for the sake of business, making sure those new services have no flaws, and that they will work with the other existing components in the applications, is important work. At the same time, if you're working on a team that's building a small subset of a much larger application, finding out early if there are problems getting your piece to work with the others is just as critical.

That said, I am compelled to offer up a caveat. It has been my experience that the companies and trends we cover often are years removed from what enterprise developers actually are doing today. There can be a big disconnect between the vision and innovation of the software providers and the day-to-day problems development teams are trying to overcome.

Is there uptake for these ideas—agile development, continuous build and continuous testing? Are you building composite applications from disparate services that change daily, or weekly? I'd like to hear from you. Send your comments (limited to about 150 words, please) to me at drubinstein@bzmedia.com, and I'll let your words have this space in a future issue. It would be good to have software merchants and developers on the same page.

SCO LOSSES MOUNT

Couldn't help but notice that The SCO Group's revenues declined in its last fiscal quarter and its losses piled up higher. For the past nine months, in fact, SCO has posted a net loss of nearly US$13 million.

This company's future is undeniably tied to the outcome of its Unix infringement lawsuit against IBM. If it wins, it will have a lot more money to pump into its Me Inc. mobile initiatives. If not, then those "continued competitive pressures on the Company's UNIX products and services" will finally catch up with them.

Whether or not the erstwhile Unix supplier can survive at all in the mobile market, where there are plenty of continued competitive pressures, is questionable—especially if there is no change in corporate leadership. ▮

David Rubinstein is editor-in-chief of SD Times

BUSINESS BRIEFS

Business integration software company **webMethods** was expected to close a deal last month to acquire SOA registry and governance provider **Infravio** for US$38 million in cash. The companies said Infravio's registry and governance software, when combined with the recently acquired semantic technologies of Cerebra, will let users of webMethods' Fabric products more quickly create service-oriented architectures . . . **Laszlo Systems**, the developer of the open-source OpenLaszlo rich Internet application platform, has completed an US$8 million Series C round of funding, led by new investor **WI Harper Group**. Laszlo will use this round of funding to expand its sales and marketing initiatives, accelerate platform and product development efforts, and further strategic partner programs. WI Harper Group's managing director, Claude Leglise, has joined Laszlo's board of directors. At WI Harper, Leglise specializes in capitalizing on cross-border growth opportunities between the United States and Greater China . . . **Exeros**, a data mapping and automated data relationship discovery company, has garnered an additional US$12 million in private equity financing. "Large companies need to understand how data relates across the enterprise before they can ensure data consistency or improve security," said Exeros co-founder and CEO Piyush Gupta in a statement. Exeros' initial product, DataMapper, is used to discover sensitive data and create an enterprise data map for varying corporate governance, security and privacy initiatives. In addition to providing a foundation for data governance, DataMapper is a flexible data mapping tool that can be utilized in any large data integration project, including master data management, metadata repositories and legacy data migration projects.

EARNINGS: The SCO Group's fortunes took a downward turn once again with the release of third-quarter 2006 earnings that showed another precipitous drop in revenue and continuing net losses. For the period, SCO posted US$7.42 million in revenue, compared with $9.33 million for the same quarter a year earlier. The net loss for the quarter was $3.58 million, up from a loss of $2.37 million from the prior year's comparable quarter. Despite the numbers, CEO Darl McBride said in a statement: "The company has made important strides in the development and deployment of its Me Inc. mobile services and development platform. We remain committed to our UNIX business, introducing new mobile services to the marketplace and defending our intellectual property through the legal process." SCO pointed out that its expenses related to its litigation in the quarter were $2.31 million, down from $3.76 million from the same year-ago period . . . **BEA Systems** reported second-quarter 2007 earnings increased 19 percent over its previous year, to US$339.6 million. For the quarter, GAAP net income was $36.3 million, about even from the year-ago quarter. The company said GAAP results for the quarter, which ended July 31, were affected by rules covering how stock options can be expensed . . . Application life-cycle software provider **MKS** announced revenue of US$12.6 million for the fiscal 2007 first quarter, an increase of 17 percent from the same quarter in fiscal 2006. The company posted a net loss of $500,000, down from net income of $500,000 in the year-ago period. ▮

CALENDAR OF EVENTS

AJAXWorld Oct. 3–4
Santa Clara
SYS-CON MEDIA
www2.sdtimes.com/ajaxworld/ajax_062606.html

Mercury World Oct. 8–11
Las Vegas
MERCURY INTERACTIVE
www.mercuryevents.net/mercuryworld/home.cfm

Symposium/ITxpo Oct. 8–13
Orlando, Fla.
GARTNER
www.gartner.com/it/sym/2006_/sym16/sym16_home.jsp

STAR West Oct. 16–20
Anaheim
SOFTWARE QUALITY ENGINEERING
www.sqe.com/starwest

SoftSummit Oct. 17–18
Santa Clara
MACROVISION
www.softsummit.com

Development Products Conference Oct. 19–20
San Jose
EVANS DATA
www.evansdata.com/dpc

Oracle OpenWorld Oct. 22–26
San Francisco
ORACLE
www.oracle.com/openworld

OOPSLA Oct. 22–26
Portland, Ore.
ACM SIGPLAN
www.oopsla.org/2006

Trolltech Developer Days Oct. 26–27
San Jose
TROLLTECH
www.trolltech.com/company/newsroom/events/allevents/devdays2006

Colorado Software Summit Oct. 22–27
Keystone, Colo.
KOVSKY CONFERENCE PRODUCTIONS
www.softwaresummit.com

Zend/PHP Conference & Expo Oct. 30–Nov. 2
San Jose
KB CONFERENCES
zendcon06.kbconferences.com

ASP.NET Connections Nov. 6–9
Las Vegas
DEVCONNECTIONS
www.devconnections.com

Software Test & Performance Conference Nov. 7–9
Boston
BZ MEDIA
www.stpcon.com

Web 2.0 Conference Nov. 7–9
San Francisco
O'REILLY MEDIA
www.web2con.com

Six Sigma in Software & IT Nov. 7–9
San Francisco
WCB
www.wcbf.com/quality/5068

SuperComputing 2006 Nov. 11–17
Tampa, Fla.
IEEE COMPUTER SOCIETY
sc06.supercomputing.org

For a more complete calendar of U.S. software development events, see www.bzmedia.com/calendar.

Information is subject to change. Send news about upcoming events to events@bzmedia.com.

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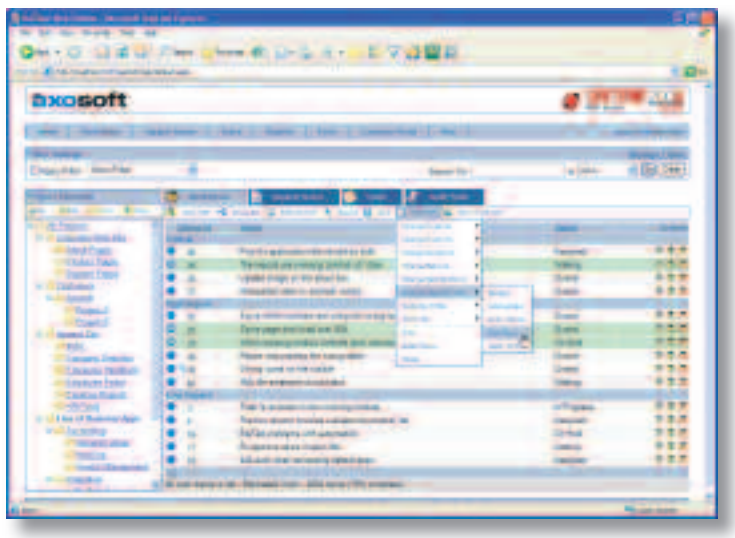

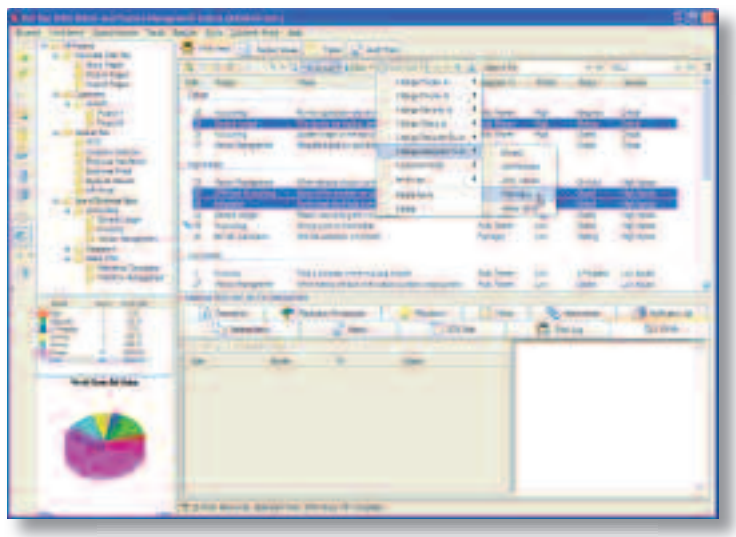

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